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Master's Thesis of Public Administration

Satisfaction Level of Providers on e-Procurement System in Indonesia

August 2016

Graduate School of Public Administration

Seoul National University

Global Public Administration Major

Rangga Agung Prabowo

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Abstract

Satisfaction Level of Providers On e-Procurement System in Indonesia

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E-procurement is a tool for government to implement public procurement activity. Indonesia has successfully changed public procurement paradigm. Indonesia started e-procurement system in 2010. It has been proven that government issued and established the legal framework, institutions and system of e-procurement. In this study the researcher used a mixed approach qualitative and quantitative methodology to describe and explain the findings.

This research focused on current status e-procurement implementation and satisfaction level of providers in e-procurement implementation. The satisfaction level of providers reviewed by transparency, accountability and integrity variables. The aim of this research is to evaluate the performance of e-procurement in Indonesia. The research conducted in Ministry of Environment and Forestry with 103 respondents. The findings of this research indicate the government showed progress to improve the e-procurement quality and majority of the providers were satisfied with the e-procurement implementations in Indonesia.

Keywords: current status of e-procurement, provider's satisfaction, survey research.

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ABBREVIATIONS AND ACRONYMS

APBN	Indonesia Annual Budget (Anggaran Pendapatan dan Belanja Negara)
<i>BAPPENAS</i>	<i>National Development and Planning Agency (Badan Perencanaan Pembangunan Nasional)</i>
BPKP	The Development Finance Comptroller (Badan Pengawasan Keuangan dan Pembangunan)
DAU	General Allocation Fund (Dana Alokasi Umum)
DAK	Special Allocation Funds (Dana Alokasi Khusus)
GDP	Gross Domestic Product
K/L/D/I	Ministry/Agency/Local Government/Institution (Kementerian/Lembaga/Daerah/Institusi)
KPK	Corruption Eradication Commission (Komisi Pemberantasan Korupsi)
LEMSANEG	State Code Institution (Lembaga Sandi Negara)
LKPP	National Public Procurement Agency (Lembaga Kajian Pengadaan Barang dan Jasa Pemerintah)
LPSE	Electronic Procurement Services (Layanan Pengadaan Secara Elektronik)
SPSE	<i>e-procurement system</i> (Sistem Pengadaan Secara Elektronik)
ULP	Procurement Service Unit (Unit Layanan Pengadaan)
USAID	The United States Agency for International Development

CHAPTER ONE

INTRODUCTION

1.1. Background of the Research

Indonesia started the procurement of goods and services, especially in government institutions, through e-procurement system in 2010. This referring to the presidential decree No. 54 year 2010 about procurement of goods and services by Government Institution, and supported by Head of National Public Procurement Agency (LKPP) letter no. 2/2010. Currently, the procurement of goods and services performed by the government has entered the fourth years. But, based on LKPP data 2013, the total of government institution was applied the e-procurement system still around 89,4% from 100% target.

The purposes of e-procurement are to provide goods/services in adequate amounts, liable quality and price, right times and right place, effective and efficient manner. The change of paradigm in the procurement of goods / services by government is very significant; the implementation of the activities previously carried out by the manual system is switched to electronic system (e-procurement). There are obstacles on bureaucracy reform in procurement implementation. The obstacles are human resources capability, the reluctant of stakeholder in e-procurement implementation, and the imperfectness of e-procurement system.

The standard of service is a benchmark that is used as a guide for service delivery and service quality as a reference of assessment obligations to the community in order to quality service, fast, easy, affordable and scalable (Law No.25 of 2009 on public service). One of the purposes of the application of e-procurement in public services is to support a fair competition among providers, which creates maintaining investment climate. In e-procurement context, to support competition among the providers is government responsibility. Government needs to enhance quality of e-procurement by increasing human resources quality and the quality of e-procurement system.

Procurement is one important part in the development cycle. Procurement policy in Indonesia is to increase the use of domestic product, foster the participation of national providers, to increase the participation of small businesses including small cooperatives and community groups and simplify rules and procedures to speed up the decision making process in the procurement. This policy aligns with national goal to expand employment and develop the domestic industry in order to improve the domestic product to be more competitive in international trade.

Based on the data, the amount of funds that are managed through the procurement process in 2014 was estimated around USD 45 billion (central government budget allocation) and USD 24 billion (local government budget allocation). Referring to Indonesia Procurement Watch (IPW), every year there are about 400.000 packages in 560 districts / cities within Indonesia.

Efforts to achieve good governance processes through e-procurement systems are regularly implemented. LKPP as an organization which is responsible for the procurement process of making annual progress to improve the capacity of human resources, improve the system and also strengthen regulation of e-procurement. Based on annual report was published by LKPP in 2013, number of government institutions apply e-procurement was increasing, 98.9% central government (ministries / agencies) and 80% local governments (provincial / district / city) have been implement the e-procurement system. This is align with Presidential Instruction No.1 of 2013 on Corruption Eradication Action Plan (RAN-PK) which mentions all the institutions of the central government (ministry / agency) and Local Government (Provincial / District / City) should make the process of procurement through electronic procurement system. Another fact, to improve capability of human resources, LKPP have been conducting the training activity 517 times in 2013. And this year, LKPP have updated the e-procurement system to avoid the potential for fraud and corruption. But, there are some targets are not achieved by LKPP, specifically an increase in the number of bidders to participate in bidding is not reached, on average for a number of companies bidding activities that follow are less than 6 participants.

But, nowadays the condition of procurement system in Indonesia is still stagnant and tends to critical. Based on Corruption Eradication Commission (KPK) data 2010, 16 of 40 cases handled by KPK were the procurement cases and estimation of inefficiency around USD 8 billion. Furthermore, citing data from Indonesia Corruption Watch, on semester I

2013 case of corruption it's caused by procurement cases was increasing, 114 of 293 cases or 46, 4% and 314 suspects. During the year 2013, according to data LKPP, The total number of cases related with objection of the procurement process is 7.349 cases. The objection is caused by several factors: error input by the committee (21%), budget change (4.3%), participants entering the offers less than three (11.3%), and participants failing the evaluation (32%). Furthermore based on Data was released IPW 2014 showed 70% of cases of corruption in Indonesia caused procurement irregularities.

Referring to that progress was held by LKPP, Indonesia was succeeded move from manual system to e-procurement system. But, to improve the quality of e-procurement system, the government needs an active role from many stakeholders who including in procurement system such as Electronic Procurement Service (LPSE) is a unit who serves the goods / services process by electronically, procurement services unit (ULP), the firms, auditor, procurement team, and user to minimize the potency of fraud and corruption.

One of regulations to improve the e-procurement system is LPSE as the representative of LKPP on each ministry/agencies who have role to organize the e-procurement process within ministry/agencies must have the electronic certificate. Furthermore, one steps to get electronic certificate, ULP need to get consumer rating seal. Consumer rating seal are a reliability certificate which is based on the subjective assessment of customer satisfaction to service electronic transactions. This certificate guarantees that the business communities have gained recognition of customer satisfaction

based on the real experiences of consumers include pre-transaction process, transaction, and post-transaction. It is referring to Government regulation of Indonesia No. 82 year 2012 about system implementation and electronics transaction.

1.2. Research Question

In the plan of this study, based on the background of e-procurement system was held on Indonesia started in 2010 and regarding on the regulation about consumer evaluation on e-procurement implementation, the researcher will focus on the satisfaction level of providers in the implementation of e-procurement, especially to look how the procurement system and e-procurement implementation work. Actually, many stakeholder can defined as the customer on e-procurement process such as the LPSE, procurement team, procurement service unit (ULP), auditor, providers and user.

But, In this study researcher will focused on providers as customer of e-procurement implementation. Because, the researcher view the pattern between providers as persons or entities who use government services and e-procurement system who it is consist LPSE, procurement team, procurement service unit (LPSE), auditor, and user can defined as government that provides services to the community. In simple term, researcher focused this research as G2B (Government to Business). So the research question to be raised is: **How is the level of providers satisfaction on e-procurement implementation in Indonesia (Study Case on Ministry of Forestry)??**

The benefits of this research are:

- a. To evaluate the performance of e-procurement system,
- b. To be an input for policy making consideration,
- c. To be an input for the performance improvements.

1.3. Conceptual Framework

Conceptual framework is meant to provide a visual presentation of the main issue to be studied. In this research, researcher tries to make simple the scope of research through the diagram. It basically shows the independent variables, dependent variables and indicator how to measure the research.

Based on the diagram shows the level of satisfaction as the dependent variable. Level of satisfaction can be measure by system quality and information quality based on DeLone and McLean (2003). System quality was measured in terms of ease-of-use, functionality, reliability, flexibility, data quality, portability, integration, and importance. Whereas, Information quality was measured in terms of accuracy, timeliness, completeness, relevance, and consistency.

In e-procurement system context, researcher tries to divide those indicators into 3 variables. Those variables are transparency, accountability and integrity. Those independent variables are principles of procurement process. Transparency related with the provisions and information about procurement process can be informed well and clear to all providers who follow the bidding process. Accountable it means procurement process must be

appropriate with rules and regulations (presidential decree No. 54/2010). Further, Integrity can be defined as actions in accordance with the norms, values, and principles that have been set.

Based on those variables, researches have hypothesized transparency, accountability and integrity variables have correlation to consumer satisfaction on e-procurement implementation. In the opinion of researcher, information quality and system quality are related with transparency, accountability and integrity. When the index of transparency is increased, we can predict the information quality is increased also. Transparency will influence the quality of information and will increase the user satisfaction on the e-procurement process. The other things are accountability and integrity are connected with system quality, when the systems were applied appropriately with the rules and regulation and the person who operating that system have good integrity, it will be increasing the system quality and certainly will increase user satisfaction.

CHAPTER TWO

LITERATURE REVIEW

2.1 E-Procurement Implementation

E procurement is a part of e- government. E-procurement as a tool to support public procurement process by specific set of instrument, technologies and organizational solutions (Gardenal, et all). Procurement is overall process of acquiring goods, civil, works, and services which include all function from the identification needs, selection, and solicitation of source, preparation and award of contract, and all phase of contract administration through the end of a services contract or the useful life of an asset (Thai, 2009). Other scholar, Schoenherr and Tummala (2007) have defined the concept of E-Procurement as the sourcing of goods or services via electronic means, usually through internet. Defining E-procurement is more accurate by understanding using electronic communication and transaction processing by government institution and other public sector organisations when buying supplies and services or tendering public works (Cattaneo, et all, 2013).

E-Procurement activity needs to be supported by the availability and integration of technology, standardization process, the regulation, and capability of human resources. In its broader sense UN defines e-procurement involves electronic data transfers to support operational, tactical and strategic procurement. A quote from S.Croom and A. Bandon Jones (2007), they told “E-procurement systems typically include a significant dependence on the

effectiveness of dyadic processes, requiring suppliers to have Internet access and appropriate systems to receive data from the customer. e-procurement systems were not viewed simply as catalogue and ordering systems, but provided opportunities for much more communication and knowledge sharing with supply partners”

Referring to Panayiotou et al (2004), E-Procurement can assist the Government to improve the way it does its business by reducing transaction cost, making better decisions and getting more value. According them, the characteristic e-procurement on Government was similiar with e-procurement on private sector, Government procurement want to find sources of the supplies at a potential cheapest price and between acceptable limits of quality. On Guidebook on anti-corruption and the management of public finance year 2013, e-procurement as a tool to reduce corruption in public procurement, the system eliminate or minimize the human interaction between bidders and the procurement personnel.

Croom and Johnston (2003) address issues relating to the impact of e-business developments on internal customer service with a focus on e-procurement introduction. The e-procurement process is the basis for one of the primary internal-customer-provider interfaces and the paper presents a valid and useful domain of study in internal customer service. They focus their analysis on three e-procurement-related issues: (1) the impact of e-procurement adoption, (2) implications of e-procurement adoption for process compliance, and (3) consequences of internal customer satisfaction for e-procurement adoption.

The effective procurement management will be developed with many factors like the capacity of procurement team, the organization of work, managing timetable effectively, fair evaluation method and fair contract. Effective procurement requires organized teamwork : authorities, responsibilities, schedule and resources (Eduardo Talero, 2004) in Velnampy.

Referring to Velnampy, Organizational factor is divided in to three subjects; there are finance, human resources and technics. He says if the organizational factors have a positives correlation effectiveness of procurement management. While the organizational factors are increasing, the effectiveness of procurement management will increase also. To achieve the required levels of procurement, government shall focus on people, knowledge, skills and capabilities. Lack of capability on the procurers can also have serious consequences for the bidding process.

A. Gunasekaran and E.W.T. Ngai (2008) examined the importance of e-procurement in Hong Kong. They found impact on adopting e-procurement. The impact after the private sector adopted e-procurement system in their management. 85% companies feel that adoption of e-procurement will significantly contribute to: improvements in efficiency, achieving supply chain management, increased customer satisfaction, reduction in operational tasks, reduction in processing time, and reduction in transactions costs.

2.2 Obstacle on e-procurement implementation

A.Gunasekaran et al (2009), have observed the condition of small medium enterprise industry on e-procurement adoption, they found the barrier on e-procurement implementation such as the top management does not have initiative or priority to support the e-procurement system, fear of change to a new system, immaturity of the technology, lack of skills and knowledge in E-procurement, insufficient financial support, and security concerns.

The other result was found by S.Croom and A. Bandon Jones (2007) regarding their study about a conceptual structural model of the key decision variables, mediating variables and outcomes from the e-procurement process. They showed process improvement has not been achieved simply through the implementation of new systems, but considerable effort and time had been necessary to train, educate and support users to ensure that systems are used correctly and problems are resolved speedily. E-procurement system requires continuous improvement and refinement to enhance the success and satisfaction of both parties between administrator and users.

2.3 Level of Satisfaction Concepts

E-procurement should be connected with citizens, as citizens constitute the most significant user groups for e-procurement information and services. A-user centric approach is essential when rethinking e-government strategies, especially in response to criticism comes from user/customer.

Oliver (1999) defined satisfaction as the perception of a pleasurable fulfillment of a service. For analytical purposes, customer satisfaction is measured by disaggregating it into two constituent parts: transactional satisfaction and overall satisfaction (Shanker et al., 2003).

Kumat et al (2007) developed conceptual framework for succesful e-Government adoption. Through these analyzation, they emphasize e-Government adoption primarily relate adoption to innovation and behavioral aspects. The models consider citizens to be the focal point of e-Government services. User characteristics and website design directly influence e-Government adoption. Service quality has a direct bearing on user satisfaction, which in turns influences the adoption of e-Government (Kumar, et all, 2007). The success of e-Government efforts depends, to a great extent, on how well the targeted users for such services, citizens in general, make use of them.

To measure the customer satisfaction in e-procurement implementation, we can emphasize by the principles of e-procurement. Transparency, accountability, and integrity are the principle can drawing the condition of e-procurement or bidding process, the principles will be affect the response of customer satisfaction.

The concepts of integrity, transparency and accountability have been identified by the UN countries, collectively and individually, as part of the founding principles of public administration (Armstrong, 2005). In developing countries, public procurement makes for an average 15-20 per cent of their GDP and the public procurement sector is often the largest domestic market (OECD, 2011). The impact dimension represent the organizational area which

could benefit the most from the introduction of e-procurement : efficiency, effectiveness, competitiveness, dematerialization and transparency (Gardenal, et al). Referring to UN Procurement Book, accountability on e-procurement are aspect to mitigate the risk of fraud, corruption, and unprofessional. On public procurement system, public procurement regulation is to ensure integrity in the system. Integrity in here related with avoiding corruption and conflict of interest (Arrowsmith, *et all*).

Implementation e-procurement can be very efficient in increasing competition and transparency (UN, 2013). Transparency as a tool for tackling corruption. Without transparency, open competition cannot prevail, corrupt dealings can proliferate, and other failings in the procurement process may be covered up, so weakening accountability (Jones, 2010). To gain the succes of and transparency, Human and non-human as the important actor on the e-procument process (Alaweti, *et all*). In this study I present the definition, theories, and theorical frameworks about e-procurement especially on accountabilty, transparancy, and integrity.

Millard (2008), any 3 types of goals concern public policy :

1. Efficiency, is refer about savings. Efficiency mainly deals with value for government.
2. Effectiveness, has more to do quality services, and as a result the emphasis is on the value for constituents. Effectiveness is perceived to focus on the outcomes and impacts of e-government services on behalf of the users.

3. Governance, more about good governance practice to services the society.

Impact of good governance will increasing user satisfaction, reduce administration burden, more inclusive public services, better transparency, and accountability.

Two fold paradigm shift towards user oriented e-government policies can be realized:

1. The development of policies should be more citizen-centric.
2. The assessment and evaluation of the policies should incorporate both elements of efficiency and effectiveness.

2.4 Theories explaining Accountability, Transparence, and Integrity

The aim of this section is to present the theories relevent about accountability, transparance and integrity. Three aspect as tools to look for the effectiveness on e-procurement implementation.

Accountability

Cited from UNDP (2010), “Accountability is the obligation of power-holders to take responsibility for their actions. It describes the rights and responsibilities that exist between people and the institution [including governments, civil society and market actors that have an impact on their

lives”. The definition from Queensland Government (2006), Accountability is the obligation to account for the way particular duties have been performed. Accountability is a standard of public life, where holders of public office are accountable for their decisions and actions to the public and must submit themselves to whatever scrutiny is appropriate to their offices (Armstrong, 2005).

For accountability to function there must also be transparency (Queensland Government, 2006). Accountability and transparency are related concepts. Demonstrated accountability and transparency reduces the likelihood of unethical behaviour, reassures the community and instils confidence in all stakeholders concerning the integrity of decisions (Queensland Government, 2006). Transparency is considered as one of the most effective deterrents to corruption and a pre-condition for ensuring public officials’ accountability (OECD, 2007). To be effective, accountability must have two components: answerability - the obligation to provide an account and the right to get a response; and enforceability - ensuring that action is taken or redress provided when accountability fails (UNDP, 2001).

The typical items under the accountability measure were the commitments and integrity of procurement officers; an adequate review requirement of the conducts of the procurement; adequate system to prevent fraud and corruption in procurement; practices to follow established code of conduct; practices of bid challenge system; and availability and accessibility of practices for bidders to report bribes (Abebe, Gizachew).

Croom and A. Brandon Jones (2007) on their research about evaluation of e-procurement implementation and operation in the UK public sector present e-procurement usage has associated to reduce the costs, Typically, the cost-per-order was estimated to have fallen from an average of £70 to around £15. Since e-procurement reduces the cost of search, increases access supply availability, enables real time control of spending, increases management information, and increases control, respondents perceived they had increased their leverage in buyer–supplier relationships.

Transparency

International organizations and NGOs advocate transparency as a necessary condition for better government quality, greater accountability and a more limited scope for corruption and impunity (Bauhr. et al, 2012). Transparency in public procurement is about information. The access to key procurement information by civil society, the media and other stakeholders, and the ways in which these actors can use the information, directly affects accountability. Furthermore, transparency is considered a highly cost-effective way of achieving greater accountability (Schapper 2008: 116).

Transparency is a multifaceted concept that is often conflated with accountability or even corruption, impartiality, and rule of law (Bauhr. et al, 2012). Referring to Transparency International (2011), Transparency is a cornerstone of anti-corruption programmes, and transparency means comprehensive access to relevant information.

Transparency Indicator based on the assessment of the completeness and quality of the information provided to buyers and suppliers on the platform about the use of its main services for the pre-award phase. Transparency will be based on the quality and completeness of the information needed to insure full transparency (Catteneo. et al, 2013). To measure the transparency on e-procurement, Gardenal used three indicator : 1. Percentage of tendering procedure whose documentation is available online, 2. Percentage of tendering procedure whose outcome (winner, price, ranking) is available online, 3. Percentage of tendering procedure that uses technical evaluation in tabular format.

Integrity

The four basic pillars of integrity in public procurement are transparency, good management, the prevention of misconduct as well as accountability and control (Anonymous, 2012). The concept of integrity has to do with perceived consistency of actions, values, methods, measures, principles, expectations and outcome (Ssonoko, 2010).

Integrity can be defined as the use of funds, resources, assets, and authority, according to the intended official purposes and in line with public interest. The OECD has set out four principles essential to integrity in procurement, They are (1) transparency, (2) good management, (3) prevention of misconduct, compliance and monitoring, and (4) accountability and control (OECD, 2008).

CHAPTER THREE

METHODOLOGY

In this study the researcher used a mixed approach Qualitative and Quantitative methodology because the two approaches complement each other and also using both approaches will help to make accurate conclusions about the study of satisfaction level of providers on e-procurement implementation. The satisfaction level will be reviewed by 3 variables such as transparency, accountability and integrity. The three variables will be influenced by the government procurement system and human resources capability.

Hence, the research method is a mixed method (quantitative and qualitative one) which will try to answer e-procurement policy evolution at a central government level. The quantitative aspect of research design is discussed, including the unit of analysis, the population and the sample, operationalization of construct, approach to ensuring validity, survey administration procedures and the statistical techniques and tools used to validate the research model and, thus to test the hypotheses. The qualitative aspect is discussed, including the choice of respondents, questionnaire questions, and the approach employed for qualitative data analysis.

3.1 Measurement Variable

The study specifies independent and dependent variable that will be examine in the research and analyzed their impact on the e-procurement system. The research model show that to measure level satisfaction on e-procurement depends on the accountability, transparency, and integrity.

3.1.1. The independent variables

These variables are input factors that measured and manipulated in the study to determine their effect on the output of level satisfaction of provider on implementing e-procurement in Ministry Forestry. These two variables are the inputs to e-procurement model. The independent variables are:

a. Transparency

Transparency is factor influence accountability, the transparency will be measured with 4 indicators such as accessibility of information, availability of information, clarity of information, and responsibility to handle complaint.

The information about the information bidding has been uploaded in our website. In this research the first indicator about accessibility of information that the researcher want to see is the compliance of Ministry of Forestry to publication of procurement information in the website. Many things can affect the accessibility of information of such as internet accessibility, connection and access speed will affect the loading speed of the website.

The second about availability of information indicators, the researcher want to look the availability all the procurement activity in websites, it

consists the schedule on each steps, a clear timetable, features on e-procurement homepage and suitability of procurement types.

The third, indicator related clarity of information, in this indicator researcher will look the response of providers when reading the instruction and information about the procurement activities. The information of procurement as a responsibility of procurement team and users to give the clear information related to the activities. The clarity of information enhances the competitiveness among the providers.

The fourth, regarding responsibility to handle complaints. The implementation of e-procurement has steps about *Aanwijzing* and objection period. In this step, the procurement team will exercise responsibility to handle complaints. The providers who follow the bidding process have opportunity to ask or complain about the information, the process, the result if they think the process of bidding not going well or the process having potency of fraud.

b. Accountability

The accountability is the other variable want to be measured. Accountability and transparency are related concepts to measure the accountability researcher used 3 indicators such as using the right regulation, using the right of implementation process, and efficiency.

The use of the appropriate regulation is the indicator to look the procurement team using the right regulation. The compatibility of type of procurement is different each other, because the type of procurement technically depends on the kind of procurement.

Right implementation process can be actualized when procurement team used the appropriate regulation. It includes step by step of procurement cycle and duration of time.

To measure the indicators of efficiency, researcher wants to look the time efficiency of implementing process. The efficiency will influence the procurement time and will influence the success of the project. Furthermore, assessment methods of procurement should be done precisely according to the conditions that exist. Errors on procurement methods can lead to wastage of time and costs. Survey the market price so that it can be produced estimation prices at reasonable prices or using a standard reference the official price; Evaluation and assessment of all offers by selecting the best of value for money.

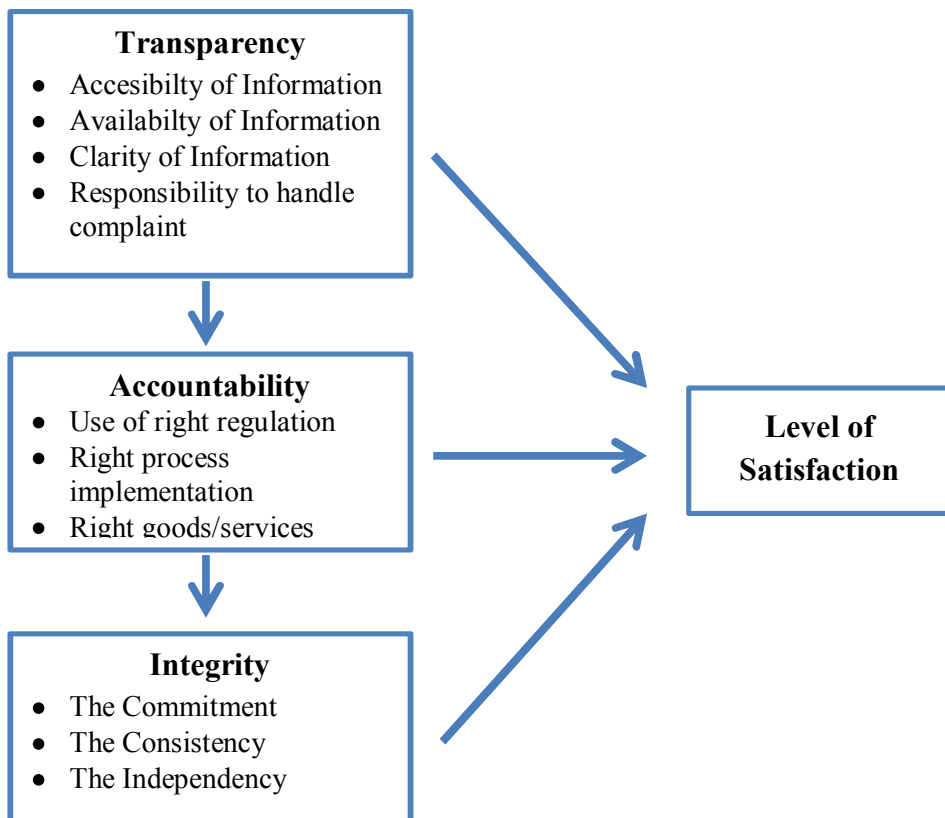
c. Integrity

Accountability and transparency are associated with integrity. Both of variables are part of the concept of integrity. The integrity of public services can be interpreted as a commitment to provide excellent service to the public by promoting morality as a base to realize clean and good governance. The integrity will be measured by 3 indicators: the commitment, consistency, and independency.

Commitment is the process to see if the procurement team is in accordance with the applicable rules and principles. Concept of fraud, corruption, collusion and nepotism must be avoided in the implementing process.

Consistency will be measured by adherence to the correct implementation of the regulation and assertive with the time schedule made by the procurement team.

Independent means the procurement teams have free or independent decision from intervention of any party to carry out the procurement process and decision making related to procurement.



Graph 1. Research conceptual framework

3.1.2 The dependent variable

The level of satisfaction is a dependent variable. The level satisfaction will be affected by three principles of procurement. The three principles of procurement are transparency, accountability and integrity. The level of satisfaction will increase when the principle of procurement can be implemented well.

3.2 Technique Sampling and Research Object

In order to have focuses findings according to the above research model, the research objects is e-procurement on Ministry of Forestry and Environment. Especially the e-procurement process was held on central office.

In this research, the researcher will use stratified random sampling, Stratified random sample is a population sample that requires the population to be divided into smaller groups, called strata. Random samples can be taken from each stratum. The Population of provider will be separated in 4 kinds. The first, the providers have project related with goods procurement, second the providers who have project related with consulting services, third the providers have project related with construction procurement and for the last one the providers who have project related with other services procurement.

To increase the objectivity of providers/respondent who follows the survey in this research, researcher provides the limitation in survey. A criterion of provider for survey is firm or provider who submit bidding document to follow bidding process.

3.3 Hypotheses

The following statement considered as hypotheses are expressed in null-forms as follow :

- H_1 : Level satisfaction of Providers is not significantly correlated with transparency factor.
- H_2 : Level satisfaction of Providers is not significantly correlated with accountability factor.
- H_3 : Level satisfaction of Providers is not significantly correlated with integrity factor.

3.4 Concepts for Sampling Data

Based on preliminary research, researcher was found the interesting fact on e-procurement process at central office. Actually, e-procurement implementation in Ministry of Forestry was started on 2010, but the obligation to follow e-procurement mechanism through website www.lpse.dephut.go.id was simultaneously begun on 2013.

During the period 2013-2014, LPSE Ministry of Forestry as the admin for central office has launched 142 packages bidding package. These package consist 53 for goods bidding packages, 61 consultant services bidding packages, 18 others goods services bidding packages, and 10 construction bidding packages as shown on the graph below.

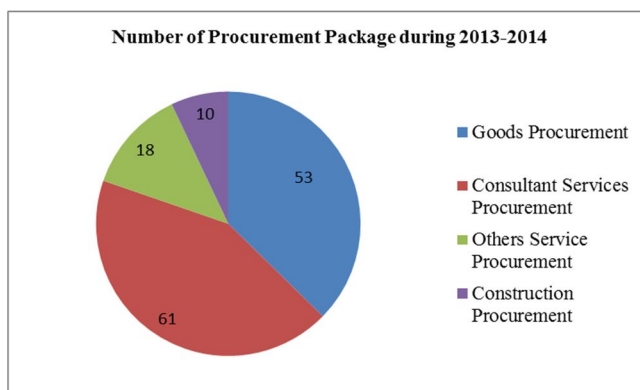
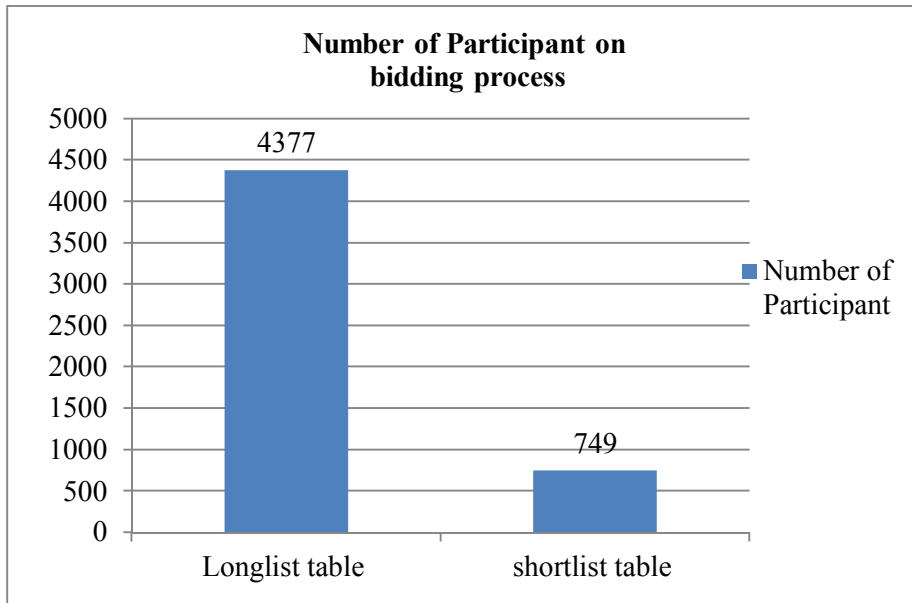


Chart 1. Number of Procurement Package During 2013-2014

The longlist table of participant during these periods are 4443 firms who interest with the bidding packages, but the for shortlist table of participant who submit the document to follow the bidding process only 749 firms participate on bidding process. Researcher can say the proportion who really interesting to follow bidding process and try to compete with each other on bidding process only 17%. This data will be criticized on discussion and analysis chapter. Researcher have decided to used data from short list table to make the observation more objective, because the provider who have been submit the bidding document can gave objectivity about e-procurement implementation.



Graph 2. Number of Participant on Bidding Process

In light of the fact that it is not feasible for the researcher to study the whole population, sampling is always done so that result can be generalized on the whole population of interest as long prescribed procedures are followed to the letter (Earl Babbie, 2012). Based on preliminary data, researchers try to analyze the composition of bidding package. This aims to make easier the target of population and actual sample who want to be a targeted, In this research, researcher will use stratified random sampling. Because, based on the preliminary research researcher found different characteristic in population, so in this study will dividing the population into four sub population.

Researcher have been analyzed the providers who follow on each categorized on e-procurement process. For goods bidding package, 182 providers were as the targeted population even though they are win or lose

that bidding. On consultant services bidding package 135 providers, for others services bidding package 51 providers and construction bidding package 46 providers. The detail about the composition shown on the table below.

	Targeted population (N)	Target sample Size (%)	Actual Sample (n)
Goods Bidding Package	182	30	54
Consultant services package	135	40	54
other services package	51	100	51
Construction services package	56	100	51
Total	424		210

Table 1. Sampling frame and sample size of the study

This study used primary and secondary data. The primary data including the finding collected by using questionnaire from providers and secondary data include the review of different reports and guideline or regulation related e-procurement. In this research, researcher will distributing questionnaire to providers to look their perception about e-procurement implementation. The questionnaire was developed with open and closed ended question.

To process and analysis the qualitative data, researcher will using SPSS programme. The descriptive statistical data such as table, graph, and percentage will proceed by Microsoft excel 2007.

This study ensured that the data collected are a good representative of the entire population and the problem in question. In order to achieve this, the tools were pre tested so as to assess their correctness in term of the answer that are provided by respondent. This was carried out among 25 respondents.

The result of this pilot study were analyzed so as to improve the tools. In addition, the tools were evaluated in term assessing the reliability of its assessing whether there is a chance to replicate the result by using the same method but in different environment and with different respondent.

Researcher will use random sampling technique by Microsoft excel to get the sample of respondent. The data will be used for the sample of respondent is come from total population for each categories of procurement package type. Based on table 1, researcher will take randomly the sample of providers from goods package are 54 out of 182, consultant services package are 54 out of 135, Other services package are 51 out of 51, and construction services package are 51 out of 56.

CHAPTER FOUR

PRESENTATION OF FINDINGS AND DISCUSSION

This chapter describes overview of e-procurement status in Indonesia, researcher will emphasize the e-procurement system into 3 categorizes, legal framework, institutional framework, and process e-procurement. Regarding with main object of this research, satisfaction level of providers on e-procurement implementation in Indonesia especially in Ministry of Environmental and Forestry, researcher will explain about findings of the research and analyses for each variables.

4.1 Indonesia Overview

Indonesia is a country in Southeast Asia consisting of 17,508 islands. Therefore, Indonesia is known as the largest archipelago in the world. Based on OECD Economics Survey in Indonesia were published in March 2015, total population in 2014 is 252.8 Million or ranks number 4 in the world, the demographic statistic shows that 28.5% of the population is below 14 years, 66.2 % between 15-65 years, and 5.3% over 65 years old.

The *GDP* in *Indonesia* was 888.54 billion US dollars in 2014. Based on the GDP position in 2014, rank of Indonesia was number 16 in the world and in regional of Asia was number 5 under China, Japan, India, and Korea (<http://statisticstimes.com/economy/asian-countries-by-gdp.php>).

The composition of revenue and expenditure in percent of GDP are 15.5% and 17.8%, this data show the total revenue is smaller than expenditure based on GDP perspective. The reason is before 2014 the composition of state expenditure in Indonesia had dominated by fuels subsidies and electricity subsidies. The percentage between fuels and electricity subsidies with central government expenditures budget are over 20% from total budget. But nowadays, Indonesia has been deciding to cut budget of fuels subsidies and re-allocated that budget to infrastructure in capital expenditures budget.

No	Indicators	Value
1	Population	252.8 Million
2	Employment	114.6 Million
3	GDP (in Rupiah)	10542.7 Trillion
4	GDP (In US Dollar)	888.8 Trillion
5	GDP growth rate	5 %
Public Finance (Central Government, In percent of GDP)		
6	Revenue	15.5%
7	Expenditure	17.8%

Table 2. Indicators for Indonesia on 2014

4.2 Information and Communication Technology Status

Today, information and communication technology (ICT) has been an important contribution to economic growth in the world. Indonesia also adopted ICT as tools and development. Since 2008, Indonesia enacted Law No 11/2008 about Information and Electronic Transactions. This law regulates about electronic signatures, electronic transactions, domain name, intellectual properties, and protection of personal rights, domain name, intellectual properties, and protection of personal rights, the use of electronic documents and/or information as evidence, and the illegal actions and criminal penalties may be imposed by the government. Law No 11/2008 has been a legal umbrella for e-government implementation in Indonesia.

As the representative of central government who has responsibility to handle ICT in Indonesia is Ministry of Communication and Information Technology (KOMINFO). The responsibility of Ministry of Communication and Information Technology is to formulate and implement national and technical policies in communication and informatics, including postal service, telecommunications, broadcasting, information technology and communications, multimedia services, and information dissemination.

To support and coordinating the ICT stake holder in Indonesia, President has established the Indonesian National ICT Council (DETIKNAS)

in 2006. DETIKNAS has a vision to accelerate the growth of information and communication technology (ICT) in Indonesia by through creating national ICT policy and synchronization of ICT programs throughout the Ministry or Institution.

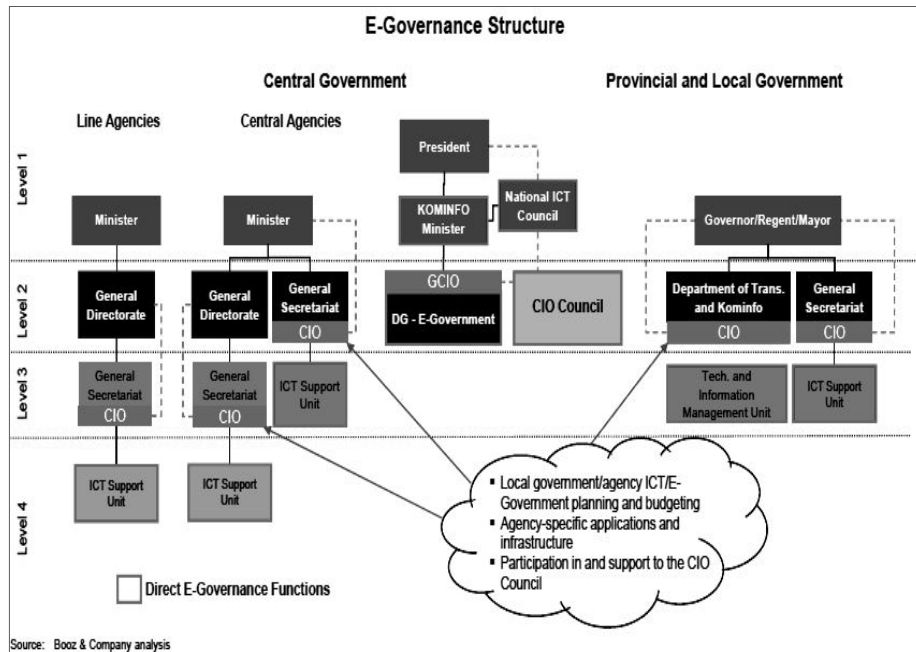


Figure 1. E-Governance Structure in Indonesia (Booz & company, 2010)

As the developing countries, the position of Indonesia based on e-government development index ranking still below than other countries in South East Asia region like Singapore, Malaysia and Philippines. The rank position of Indonesia was decrease gradually. This condition is deterioration for Indonesia, because when referred to previous data in 2012, the position of Indonesia rank number 97, but in 2014 rank of Indonesia in 106. The reasons were the score for government using ICT to deliver public service in national level, ICT infrastructure, and human capital component is quite low.

Rank	Country	EGDI	Online service component	Telecomm, Infrastructure component	Human capital component
1	Republic of Korea	0.9462	0.9764	0.9350	0.9273
3	Singapore	0.9076	0.9921	0.8793	0.8515
7	United States of America	0.8748	0.9449	0.7406	0.9390
Rank	Country	EGDI	Online service component	Telecomm, Infrastructure component	Human capital component
52	Malaysia	0.6115	0.6115	0.6115	0.6115
70	China	0.5450	0.6063	0.3554	0.6734
95	Philippines	0.4768	0.4803	0.2451	0.7051
118	India	0.3834	0.5433	0.1372	0.4698
106	Indonesia	0.4487	0.3622	0.3054	0.6786

Table 3. Comparison of e-government index

This statement also has strengthened in publication about Open Government Data Readiness assessment Indonesia was published by World Web Foundation in 2013. The report stated the score regarding general satisfaction linked to government data currently available in Indonesia only 3.88 out of 10. It means level of satisfaction related with government data is quite low. Another, regarding quality of data was published by government. They stated the data collection and management systems are largely inefficient and not linked.

Regarding the status of Global E-Readiness Ranking published by World Economic Forum in 2014, Indonesia's rank of E Readiness is still below the world average or even South-Eastern Asia. The value of Indonesia E-Government development index is 0.4026, or lower than the value of the

previous year which was 0.4107. This value is still below the South-Eastern average (0.4290) and below the world average (0.4514).

4.3 Indonesia annual budget (APBN) related to procurement activity

Indonesia annual budget (APBN) can be categorized in 5 categories of allocation. But, the majority of allocations are dominated by 2 categories. First category is state revenue and grant budget allocation. The structure of this category is consists of revenue from tax and non-tax and the revenue comes from grant. Second category is state expenditure. In this category has divided to 2 big categories. The categories are central government expenditure and transfer budget allocation to local government. Central government expenditure is expenses that are used to finance the construction of the Central Government, both held at central and regional levels (de-concentration and assistance). Central Government expenditures can be grouped into:

1. Personnel expenditure
2. Current expenditure
3. Capital expenditure
4. Funding debt interest
5. Subsidies
6. Grant expenditure

7. Social expenditure (including the Disaster Management).
8. Others expenditure

Further, transfer budget allocation to local government. This budget allocation was given to local government from central government. The structure budget of this category includes:

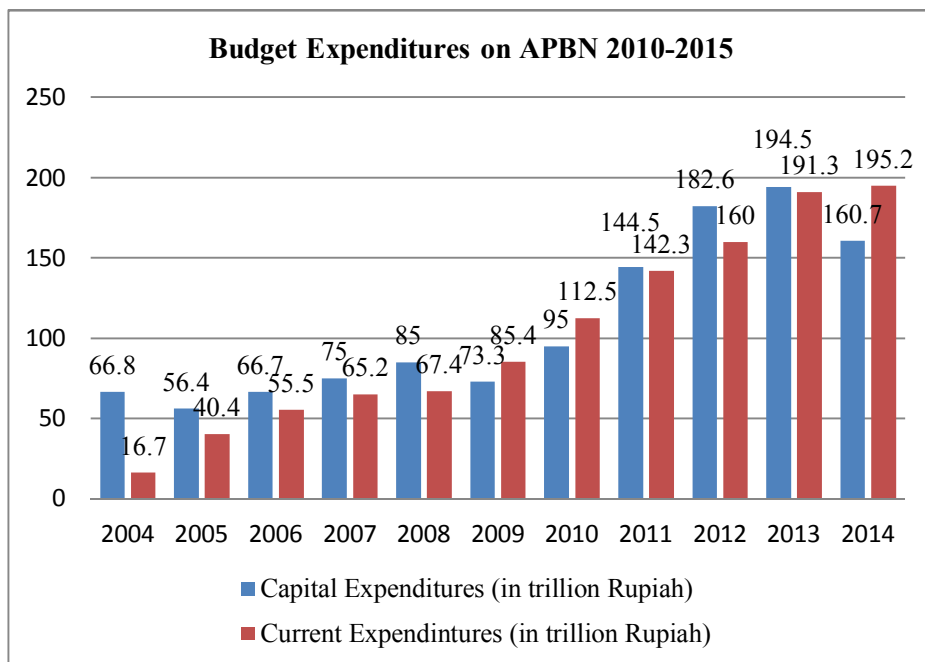
1. Revenue sharing fund, a fund sourced from APBN to local government for decentralization implementation.
2. General Allocation Fund (DAU), a fund allocated to each autonomous region (provincial / district / city) in Indonesia as development funds. DAU is one component of expenditure in the state budget, and became one of the components of revenue in the local government budget. DAU purpose is as equitable inter-regional financial ability to fund the needs of the Autonomous Region in the implementation of decentralization.
3. Special Allocation Funds (DAK) is allocation budget from the State Budget to the provincial / district / city for the purpose of financing certain specific activities that are of regional government affairs and in accordance with national priorities.
4. Special Autonomy Fund is funds allocated to finance the implementation of the special autonomy region.

Based on the structure of Indonesia state budget, generally the procurement activities can be viewed from 2 budget categories. First, capital expenditure, are funds used by government to acquire or increasing of fixed assets and other assets that benefit more than one accounting period exceeds

the minimum limit and the capitalization of fixed assets or other assets set by the government. Fixed assets are assets used for day-to-day for operational activities. The structures of capital expenditure in Indonesia Budget are land expenditure, equipment and machinery expenditure, building and construction expenditure, and other physics expenditure.

Second, the budget allocation in state budget related procurement activity is current expenditure. It is the expenditure incurred for the routine, usual, and normal day to day to run government departments and provision of various services to citizen. Current expenditure in Indonesia Budget are consist of spending on goods and services, maintenance spending and shopping trips, spending on goods or services that will be delivered to the public or the local government.

Referring to the state budget trend, since 2010 the budget allocation for capital expenditures and current expenditure was increasing rapidly. Actually, contribution related with procurement activity is not only from capital expenditure and revenue expenditure, transfer budget allocation also has contribution but it's too difficult to specify the total spending relating procurement activity. However, generally to see the trend of growth in the budget for the procurement activity can be seen through the two budgets are listed in the state budget every year.



Graph 3. Budget expenditure on state budget 2004-2005

Referring to the table above, we can see the trend of the state budget for expenditures involving the procurement of goods and services was increasing gradually. Since the beginning of 2004, the total budget for both the capital expenditure and revenue expenditure are Rp. 83.5 Trillion and increasing around 426% in 2015 to Rp. 335.9 trillion. This is a positive signal that Indonesia is in the process of improving economic development. This is consistent with C. Alexiou, 2009. Government spending on capital formation has positive and significant effect on economic growth and also N. Bayraktar, and B. Moreno-Dodson (2010) stated "Public expenditures in productive and "core"sectors , the which Consist of a combination of current and capital spending on infrastructure, health, education, and other economic sectors that

are critical for development, the joint can have a significant impact on growth (GDP per capita growth)".

But, the interesting fact is when 2009 and 2010, budget for capital expenditure is decrease rapidly, and the composition is budget expenditure lower than capital expenditure. This is an impact from economic global recession in 2008. The entire developing countries in Southeast Asia felt the same condition. Actually, based on the economic growth in 2009, Indonesia still got better economic growth than other countries. In 2009, the economic growth of Indonesia is 4.63%. This is an implication from unachieved target of tax revenue because of impact of global recession. This value is bigger than Malaysia (-1.51%), Philippines (1.51%), and Singapore (-0.6%). But, the economic recession situation in 2008, make Indonesia Government rethinking again about the composition of annual budget. The impacts from that situation, Ministry of Finance recalculate proportion of capital expenditure and reallocate the budget of capital expenditure to current expenditure.

Related with budget allocation, it also can provide a negative perception when regulation, resources, systems, and goodwill of the government to increase state budget is not in line with the spirit of development without corruption. This is also can increase the potential for corruption in the structure of the budget. According to research Ndikumana (2007), he stated there is a positive correlation between capital expenditures and corruption in African countries. And when they see the trend of budget capital expenditures and goods and services can be seen expenditures proportion of the budget for capital expenditures is greater every year.

According to Mauro (1998), when seen from the trend of the existing budget for capital expenditures budget value will be higher than the budget for financing routine such as salaries and other routine activities. This is because local budgets those are more difficult for corruption, rather than the budget that is not routine.

4.4 Indonesia e-Procurement System

Referring to, Vaidya et al (2006), critical success factor on e-procurement implementation can be defined in many factors. The factors need to consider such as organization and management, practices and process, and system and technology, security and authentication, technological standards, and system integration. Therefore, in this chapter researcher want to explain about the current condition in Indonesia, the description about e-procurement system will be divided into legal framework, institution framework, process of e-procurement, system of e-procurement and data trend of e-procurement.

4.4.1 Legal Framework

Presidential Decree No. 80/ 2003

Reform of government procurement activities in Indonesia was started by Presidential Decree No. 80/2003, which is this decree as the amendment of Presidential Decree No. 18/2000 regarding guidelines for the implementation of the goods/services of government agencies. Presidential Decree No. 80/2003 had published because many leakages in procurement

activities were funded by partially or wholly funded from state budget or local government budget and a lot of procurement activities that are not implemented well such as an inefficient, ineffective, not transparent, not fair, discriminatory and non-accountable.

The argument also strengthen in Indonesia Country Procurement Assessment Report were published by the World Bank in 2001. The report states the problem of Indonesia procurement can be specified into three aspects. First, regarding procurement regulation, the rules related with public procurement mutually overlapping with each other. This is an implication of the decentralization. Central government gives permission to local governments to publish rules or guidelines of public procurement in local government level. Another aspect regarding law enforcement, the existing legislation has not clearly indicated the legal consequences arising from negligence or intentional misconduct, so the process of enforcement of existing laws to be difficult. Another important note is institution, absence of institution or special units who have mandate to regulate the activities of government procurement.

Related to above issue, Government showed the response to reform the procurement activities in Indonesia by issuing a Presidential Decree no 80/2003. This decree became an official reference for procurement activities were carried out using the central and local government budgets, and procurement activities originating from grant. In this Decree, there are several additional chapters to improve the quality of government procurement activities, among others are:

1. Clauses regarding the procurement committee and users must have a certificate of the procurement of government goods / services. This is a realization of reforms to encourage professionalism offender procurement of goods / services of the government. The aim of this strategy to make procurement run more smoothly, minimize leakage and waste, efficient and effective.
2. Permission to announce the information of procurement activity by Internet, electronic data interchange and email. The aim of the e-procurement to facilitate sourcing, procurement processes and payments; On-line communication between Buyers with the vendors, reduce administrative costs and procurement processes, save costs and speed up the procurement process.
3. Designation Institute of Policy Development on Public Procurement (LPKPP).

President Instruction No. 5/2004

Futhermore, another action regarding e-procurement implementation in Indonesia. In 2004, President Susilo Bambang Yudhoyono had published president instruction No. 5/2004 regarding accelaration of corruption eradication. One point related with procurement in that instruction was to avoid leakage and extravagance of national budget in procurement process. Thus, President gave order to spesific government institution such as Ministry of Finance, Coordinating Ministry for the Economic Sector and National

Development and Planning Agency (BAPPENAS) to review and trial the implementation of e-procurement system under Bappenas authority.

After Presidential Instruction No.5/2004, in 2007 BAPPENAS who got mandate from President made the procurement website to accommodate the procurement planning through www.pengadaannasionalbappenas.org.id. This website accommodates Ministry/Institution/ Commission/Central Bank/Local Government/State Owned Enterprise to run their procurement activity. This instruction was mentioned in Amendment No. 4 on Presidential Decree No. 80/2003.

Significant action was occurred on September 2007 when The State of Minister of the Bappenas and Governor from five provinces (West Sumatera, East Java, West Java, Central Kalimantan and Gorontalo) made the initiation and commitment to start up e-government procurement (EGP). This project has been part of big project between Government of Indonesia and USAID. On October 2006, under project "Millennium Challenge Corporation's Indonesia Control of Corruption Project", Indonesia has got grant \$35 Million for two years to reduce opportunities for public corruption. The form of activity in this project include implementation of administrative reforms and greater judicial transparency, increased enforcement capabilities to fight money laundering, prosecution of cases of public corruption, and reduction of opportunities for corruption through the modernization of public procurement systems (USAID, 2007).

In context on procurement reform, Millennium Challenge Corporation's Indonesia Control of Corruption Project as the pilot model for e-procurement system for others government institution in Indonesia. In this project, USAID support the collection of baseline data from the five regional centers and identify suspicious and inappropriate procurement activity. (USAID, 2007).

President Regulation No. 54/2010

The significant reform of procurement activity has occurred in 2010. Government issued new regulations on the procurement of goods and services through the President Regulation No. 54/2010. This regulation is simpler, clear, detail and comprehensive. In this regulation, government have been detailing every step in process of procurement by attaching an attachment concerning public procurement plan, provider selection procedures for goods, provider selection procedures for consultant services, provider selection procedures for individual consultant, self-service procurement procedures and provider selection procedures for others services. This regulation aimed to encourage the procurement activity more efficient, transparent, and competitive.

The terms of electronic procurement has introduced in this regulation. The explanation of electronic procurement or E-Procurement is a Procurement of Goods / Services conducted using information technology and electronic transactions in accordance with the statutory provisions (Kemenkeu, 2012). The purposes of the Procurement of Government Goods / Services electronically are:

- a. To increase transparency and accountability;
- b. To improve market access and fair competition;
- c. To improve the efficiency of procurement processes;
- d. To support the process of monitoring and auditing; and
- e. To meet the needs of real-time information access.

Further, in this regulation also regulates the function of institutions such as the National Public Procurement Agency (LKPP), Electronic Procurement Services (LPSE), Procurement Service Unit (ULP), procurement official, Internal Auditor. And also, for the first time government announced the e-procurement system such as e-tendering, e-catalog, and e-purchasing. President Regulation No. 54/2010 as the significant movement of e-procurement process in Indonesia. As the information, after President Regulation No.54/2010 has been implementing, the previous regulation related with procurement regulation Indonesia such as President Instruction No. 80/2003 had been no effective.

President Instruction no. 17/2011

In 2011, President Susilo Bambang Yudhono, gave the instruction regarding Precaution and Eradication Corruption Action for 2012. One point related with e-procurement system is President gave instruction to Ministry and Institution who are the part of Central Government to implement government spending at least 75% from total procurement budget by e-procurement process. Furthermore, local government (province, regency, and city) have to implement e-procurement system to make tender project at least

40% from the total procurement budget. This is a significant instruction to every K/L/D/I to implement the e-procurement system. Referring to the data published by LKPP, number of packages were published by electronic procurement system totally increasing in 2012. Data in 2008 showed the numbers of packages were published by e-procurement system more specific used the e-tendering system only 33 packages, and has increased rapidly become 91.356 packages in 2012, and 125.337 packages used e-tendering system in 2014.

President Regulation No. 4/2015

The next step after Joko Widodo has designated as the President in 2014. He issued Amendment No. 4 on Presidential Instruction No. 54 year 2010. In this amendment, several point added to accelerate procurement activities such as:

- 1. In Presidential Instruction No. 54/2010, procurement activities in Indonesia **can be implemented** by e-procurement system. And in Amendment No. 4/2015, the clause has been changed to “Procurement activities in Indonesia **implemented by** e-procurement system”.*

The implication this clause is all of procurement activities (in this context is tendering and purchasing) have to use e-procurement system. But, for other bidding mechanism such as direct appointment scheme and beauty contest auction is possible applied by manual system.

- 2. Other points are to clarify the several clausal related to e-procurement system (SPSE) implementation, e-tendering guidelines, e-purchasing*

guidelines, acceleration of e-tendering implementation, and obligation to implement e-purchasing. The reason of this regulation has been publishing because President Joko Widodo wants to accelerate budget realization in procurement activities. Referring to previous years, the realization of procurement activities have slowed down in the beginning of the year, and will increase in middle of the year. Because of that, President has been deciding to simplify, reduce the obstacle and maximize e-procurement system to increase the time efficiency in procurement activities. President hopes the realization of annual budget will run faster in beginning of the year by implementing the new system. The table below is the summary of regulation related with public procurement in Indonesia.

<i>No</i>	<i>Title</i>	<i>Year</i>	<i>Name</i>	<i>Specific Clausal</i>
1.	<i>Presidential Decree No. 18</i>	2000	<i>Guidelines for goods/services public procurement</i>	- <i>Permission to announce the procurement information by electronic media (email, internet, etc)</i>
2.	<i>Presidential Decree No. 80</i>	2003	<i>Guidelines for goods/services public procurement</i>	- <i>Permission to announce the procurement information by email and internet.</i> - <i>Designation Institute of Policy Development on Public Procurement (LPKPP)</i>
<i>No</i>	<i>Title</i>	<i>Year</i>	<i>Name</i>	<i>Specific Clausal</i>
				- <i>Certification obligation for user of procurements services (procurement team and</i>

commitment making officer)

3. *Presidential Instruction No. 5* 2004 *Instruction to Accelerate Corruption Eradication* - Give order to Bappenas to review, trial and implementing e-procurement system

4. *President Regulation No. 8* 2006 *Amendment No. 4 on Presidential Instruction No. 80 year 2003* - Additional Clause about designation of National Procurement Website (www.pengadaannasionalbappenas.org.id) who managed by State of Minister of Bappenas.

5. *Millennium Challenge Corporation Threshold Program for Indonesia Control of Corruption Project (MCC-ICCP)* 2007 *Implement Electronic Government Procurement* - Establish e-procurement model in five regional governments as electronic procurement centers.
- Support the collection of baseline data from the five regional centers to reduce single-source procurements and to help identify suspicious and inappropriate procurement activity

6. *President Regulation No.106* 2007 *National Procurement Agency (LKPP)* *Designation National Public Procurement Agency(LKPP) as the single institution for managing the procurement policy in Indonesia*

7. *President Regulation No. 54* 2010 *Guidelines for goods/services public procurement* *Introduce LPSE as the electronic procurement service to facilitate procurement unit implementation (ULP) in procurement activity*
Introduce ULP (Procurement Unit Implementation)

<i>No</i>	<i>Title</i>	<i>Year</i>	<i>Name</i>	<i>Specific Clausal</i>
8.	<i>Head of LKPP regulation No. 02</i>	2010	<i>E-procurement services</i>	
9.	<i>President Instruction No. 17</i>	2011	<i>Instruction to precaution and corruption eradication</i>	<ul style="list-style-type: none"> - <i>Instruction to K/L/D/I for establishes LPSE in their K/L/D/I.</i> - <i>Target in 2012, based on national/local budget for procurement activity in 2012 have to use e-procurement system (SPSE) at least 75% and 40% from local government procurement budget (Province/Regency/City) have to use e-procurement system.</i>
10.	<i>Head of LKPP regulation no. 01 (Amendment no. 18/2012)</i>	2011	<i>E-tendering procedure</i>	
11.	<i>Head of LKPP regulation No. 05 (Amendment no. 15/2012)</i>	2011	<i>Standard Bidding Document for e-procurement system</i>	
12.	<i>Head of LKPP regulation no. 07 (Amendment no. 18/2014)</i>	2011	<i>Blacklist Procedure</i>	

- | | | | |
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| 13. | Head of LKPP regulation no. 09 | 2011 | Internal Auditor |
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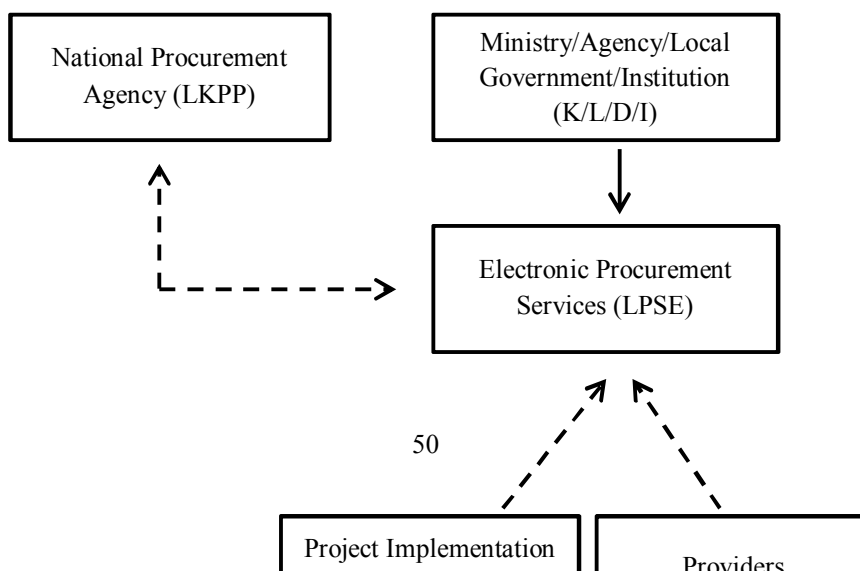
<i>No</i>	<i>Title</i>	<i>Year</i>	<i>Name</i>	<i>Specific Clausal</i>
14.	Head of LKPP regulation No. 13 (Amendment no. 7/2012 ; amendment no. 10/2013, Amendment No 11/2014,	2011	Whistle blower system	Implementation whistle blower systems with several specific conditions such as value of package more USD 700.000, has big impact for society, and get the attention for public can applied whistle blower system. Indonesia provide whistle blower website to accommodate complaints regarding procedural irregularities or abuse of authority through www.wbs.lkpp.go.id
15.	<i>Head of LKPP regulation No. 05</i>	2012	<i>Procurement Services Unit</i>	
16.	<i>President Regulation No. 70</i>	2012	<i>Amendment No. 2 on Presidential Instruction No. 54 year 2010</i>	<i>Implementation e-purchasing for time and price efficiency</i>
17.	<i>Head of LKPP regulation No. 17</i>	2012	<i>E-purchasing</i>	<i>E-catalogue regulation and e-purchasing procedures</i>
18.	<i>Head of LKPP regulation No. 18</i>	2012	<i>E-Tendering</i>	

19.	President Regulation No. 4	2015	Amendment No. 4 on Presidential Instruction No. 54 year 2010	Emphasis e-Procurement and e- Purchasing, simplifying procedure
-----	----------------------------------	------	---	--

Table 4. E-procurement progress in Indonesia

4.4.2 Institutional Framework

The process of strengthening e-procurement system also has been supported by institutional reinforcement. Governments through the legislation published by President and the technical regulations published by LKPP have been strengthening the position of e-procurement institution. The Institutions who are the main actors in e-procurement activities can be divided into 3 institutions that are LKPP, LPSE, and ULP.



Scheme 1. The institution who involved in e-Procurement System in
Indonesia

National Public Procurement Agency / LKPP

LKPP is the central institution in government who has task to develop and formulating the public procurement. LKPP has been designated through President Regulation No. 54/2010. It is a follow up from World Bank evaluation regarded absence of procurement institution in Indonesia. Therefore, Government issued the Presidential Decree No. 80/2003 regarding Designation Institute of Policy Development on Public Procurement (LPKPP). In December 2007, President has been strengthened the existence of LPKPP to be LKPP through President Regulation No. 106/2007. LKPP is institution non-departmental and their position under the presidents. The jobs these institutions such as:

- a. Develop and formulate policy regarding procurement implementation.
- b. Prepare, formulate the policies and make the standard procedures in public procurement, including procurement entities within the framework of cooperation with the Government business entity.

- c. Prepare and formulate the strategy and policy development of human resources in public procurement.
- d. Monitoring and evaluation the implementation of procurement activity.
- e. Promote and develop the information systems and supervise the implementation of electronic procurement.
- f. Manage technical guidance, advocacy and legal assistance;
- g. Implementing the public administration services in the fields of planning, administration, personnel, finance and equipment.

Existences of this institution equal with another organization who already existing in several countries such as the Office of Federal Procurement Policy (OFPP) in the United States, Office of Government Commerce (OGC) di the United Kingdom, Government Procurement Policy Board (GPPB) in the Philippines, Public Procurement Policy Office (PPPO) in Poland, and the Public Procurement Service (PPS) in the Republic of Korea.

Electronic Procurement Services / LPSE

In President Regulation No. 54/2010, Government has been deciding to designate electronic procurement service (LPSE) as the unit of procurement implementation in level of ministry/agency/local government/institution (K/L/D/I) to assist the role of LKPP. LPSE is the organization who organizes e-procurement system and facilitates K/L/D/I to National Procurement Web.

The functions of this unit are the administrator e-procurement system, registration unit and verification users, and as the user service unit and LPSE have to facilitate procurement implementation unit (ULP) for execute tender process. Every LPSE in K/L/D/I have to make agreement with LKPP to formulate and implement standard operating procedure in each LPSE on each K/L/D/I. Through Head of LKPP regulation no. 02 year 2010 about e-procurement services, the function and task of LPSE more clearly. Standard Operating procedure of LPSE includes:

- a. E-procurement System (SPSE) User registration and verification. Users SPSE in this system are procurement service unit (ULP) in K/L/D/I and providers. Every user who has registered and verified by LPSE will get a user ID and password as a representation of the person in charge of a business entity or unit from procurement services.
- b. SPSE user services such as: (1) Facilitate bidding room for bid submission, training, and verification, (2) Facilitate Internet access and intranet for SPSE users who visit the LPSE, (3) SPSE provide consulting services via the internet, telephone or visits to LPSE (4) Announcement of the problem or information to the user of SPSE when facing technical obstacles that can inhibit the activity of users SPSE.
- c. Handling problems (error handling) such as (1) handling technical problems that occur in the administration of SPSE, (2) a witness in the case of bidding documents cannot be opened by the ULP and put it in the minutes of meeting (3) LPSE can deliver the technical problems to LKPP if the problems can't solved by LPSE.

- d. SPSE infrastructure maintenance and security such as: LPSE make mechanisms and the management of servers and network security, running SPSE server management referring to standards of data center management.
- e. Maintenance performance and capacity SPSE among other are (1) LPSE conduct daily monitoring of the condition and capacity of the hard drive and RAM as well as the replacement / addition if the component is experiencing a critical condition, (2) LPSE make Internet bandwidth arrangements and bandwidth traffic monitoring, (3) LPSE monitoring the internet connection and when any connection interruption LPSE take the necessary steps immediately (4) LPSE make an announcement if any maintenance on server and / or other devices, (5) LPSE monitor the performance of software, hardware and network as well as the upgrading / replacement / addition if needed, (6) SPSE give access to LKPP for monitoring server SPSE.
- f. Archiving of electronic documents (file backup).

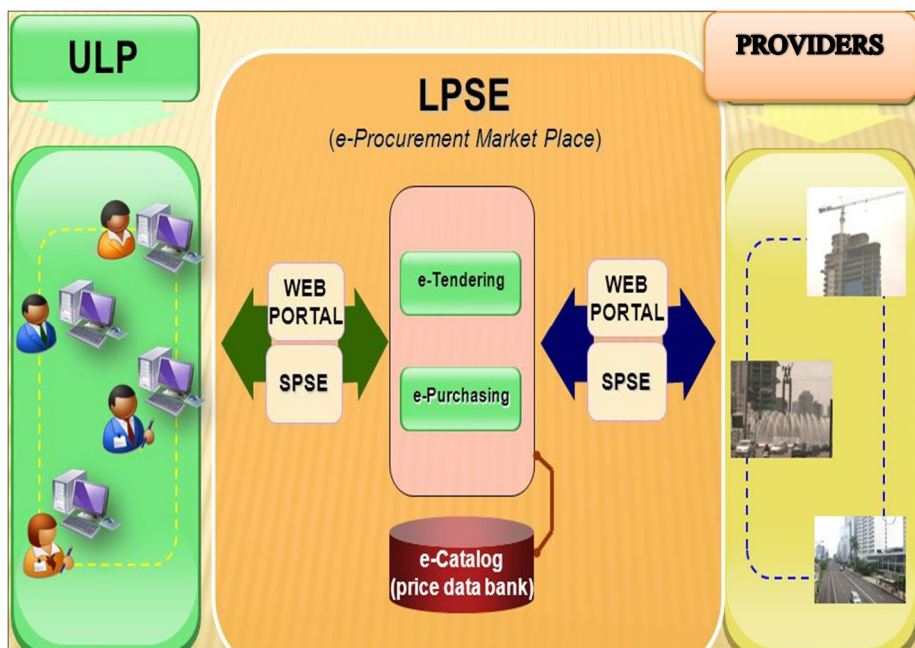


Figure 2. ULP and LPSE Position on e-procurement system

Procurement Service Unit/ULP

Another, in President Regulation No. 54/2010 introduces Procurement Service Unit (ULP). ULP is organizational unit who implemented the tender process in K/L/D/I. ULP as the part of K/L/D/I and led by Head of ULP. The existence of ULP was decided in Head of LKPP regulation No.05/2012 about Procurement Services Unit. ULP's tasks such as analysis the bidding package, announce the bidding information, evaluate the bidding documents, etc. This unit can be defined as the procurement team. The authorities of ULP include (1) publishing bidding document, (2) determining the winning bidder for: a) the tender or direct appointment scheme for goods/construction work/other services package with maximum value Rp. 100,000,000,000 (USD 7.300.000); or b) Selection or direct appointment scheme for consultancy services package with maximum value Rp. 10,000,000,000 (USD 730.000); (3) Propose sanction for authorized budget management (PA/KPA) when providers of goods/ services doing actions such as fraud, forgery and other abuses to be included in the black list.

4.4.3 Implementation System and Technology

E-Procurement System

After President Instruction no. 17 on 2012, Indonesia has significant model to implement e-procurement services. LKPP as the institution who have responsibility to handle procurement activity made significant action to build e-procurement system in Indonesia. The first action, LKPP has launched the e-procurement system known as SPSE. SPSE is an e-Procurement application developed by LKPP for use by LPSE in government agencies throughout Indonesia. This application developed in the spirit of national efficiency because it does not require license fees. SPSE developed by LKPP in collaborate with State Code Institution (Lemsaneg) for document encryption function and The Development Finance Comptroller (BPKP) to audit the subsystem. Now, LKPP implemented SPSE application 3.5 for e-tendering and e-purchasing. LKPP also launched the website portal regarding procurement activities, the website can connect with every K/L/D/I in Indonesia.

LKPP
Lembaga Kelengkapan
Pengadaan Barang/Jasa Pemerintah

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SAMPAI BERTEMU LAGI DI GEDUNG BARU LKPP

GEDUNG LKPP
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- RFQ Senior Advisor/Project Manager for Procurement Service Unit**
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Kalender Kegiatan - Lihat Semua Kegiatan

Tanggal	Nama Kegiatan
07. Oct 2015	Undangan Rakor Ahli PBJ dan ULP, Makassar, Sulawesi Tenggara
26. Sep 2015	Uji Coba Materi Pelatihan Pendukung PBJ
15. Sep 2015	[Peserta] Seminar Peran Masyarakat Mengantisipasi Korupsi PBJP, Jakarta
14. Sep	Diklat Training Officer Peningkatan Kapasitas

Figure 3. Indonesia Procurement portal launched by LKPP

(<http://www.lkpp.go.id/v3/en/>)

This website provide information regarding the condition of e-procurement in Indonesia such as regulation information, public information, training information. Also, from this website can help the stakeholder to get more information regarding planning procurement information, monitoring and evaluation e-procurement implementation, e-catalogue, whistle blower system, and other. So, the content this website is very general, its little bit difficult to get information regarding the bidding information from other K/L/D/I.

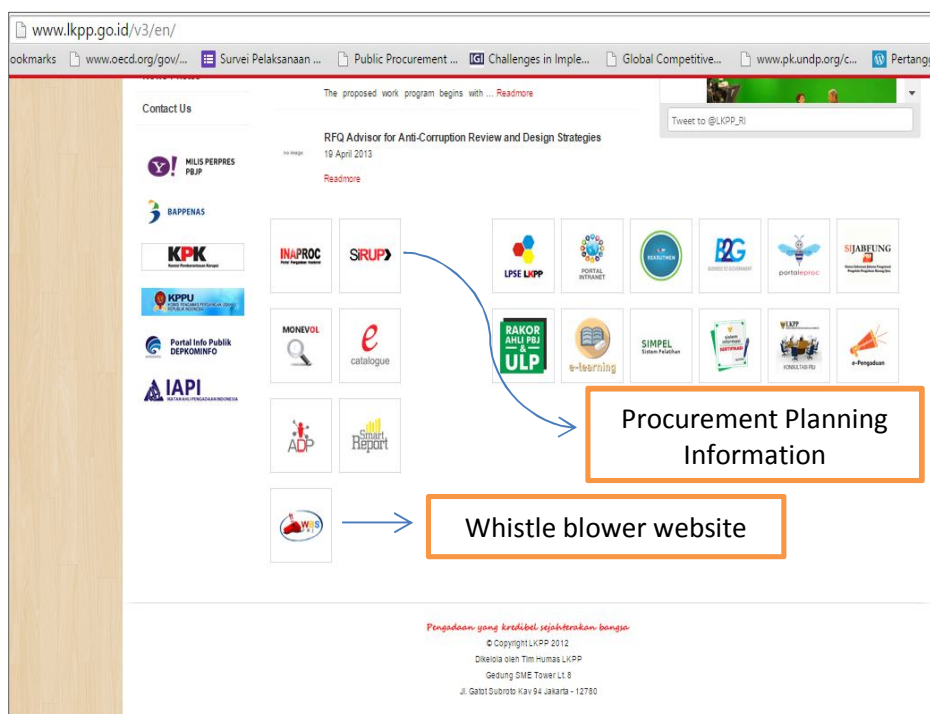


Figure 4 . Content of LKPP website

For specific procurement website in every K/L/D/I, the appearance of website have different model. This website operate by LPSE in every K/L/D/I, the system has built by LKPP using the SPSE 3.5. Furthermore, for the operation of LPSE website, LPSE take full control to run the system. This picture below show LPSE website in Ministry of forestry. So, if the user (providers or citizen) want to acces the tender information in each K/L/D/I, they should referring to spesific website like www.lpse.dephut.go.id/eproc for ministry of forestry.

The screenshot shows the LPSE KEMENTERIAN KEHUTANAN website. The header includes the LPSE logo and the text "KEMENTERIAN KEHUTANAN" and "LAYANAN PENGADAAN SECARA ELEKTRONIK". The navigation bar contains links: Home, Tentang Kami, Tanya Jawab, Regulasi, Site Map, and Kontak Kami. The main content area features a sidebar with links to INAPROC, SIRUP, e-catalogue, MONEV, Wistle Blowing System, and SDP. The main content area displays a list of procurement packages under the heading "Petunjuk" and "Penting".

No	Nama Paket	Agency	HPS	Tanggal Download
1	Pengadaan Peralatan SPAS Balai Pengelolaan DAS Solo	Jateng, Koordinator Wilayah UPT Kemenhut Prov. Jawa Tengah	538,01 jt	26 Aug - 31 Aug 2015
2	Paket 3. Pengadaan Jasa Konsultansi Identifikasi Potensi Seluruh Wilayah KPHP dan Penyusunan Draft Review Rencana Pengelolaan Hutan Jangka Panjang pada KPHP Muara Dua	Lampung, ULP UPT Kementerian LHK Prov. Lampung (BPDAS Way Seputih Way Sekampung)	541,73 jt	26 Aug - 3 Sep 2015
3	Paket 2. Pengadaan Jasa Konsultansi Identifikasi	Lampung, ULP UPT	340,22	26 Aug -

Figure 5. Ministry of Forestry Procurement Website (lpse.dephut.go.id/eproc).

Main Service Function

LPSE Website in every K/L/D/I as the main gate of bidding information in Indonesia. The providers have to refer the specific website in each K/L/D/I such as in Ministry of Forestry LPSE Website to get information regarding e-tendering. The content of this website such as e-tendering information, e-procurement news, direct procurement information, and also

this website also accommodate the users to connect another website such as planning procurement information, monitoring and evaluation e-procurement implementation, e-catalogue, whistle blower system, and others.

The tender information shown on the main page of the LPSE website. The information regarding e-tendering information or direct procurement scheme can access easily, public can access the tender information without login into the system. But, if the providers want to follow the bidding, they have to login into the system first. They have to input their username ID and password.

To get acces, providers have to register themselves in LPSE by online. After they register their company, they will get username ID and password to join and compete the tender at 627 LPSE in government agencies throughout Indonesia.

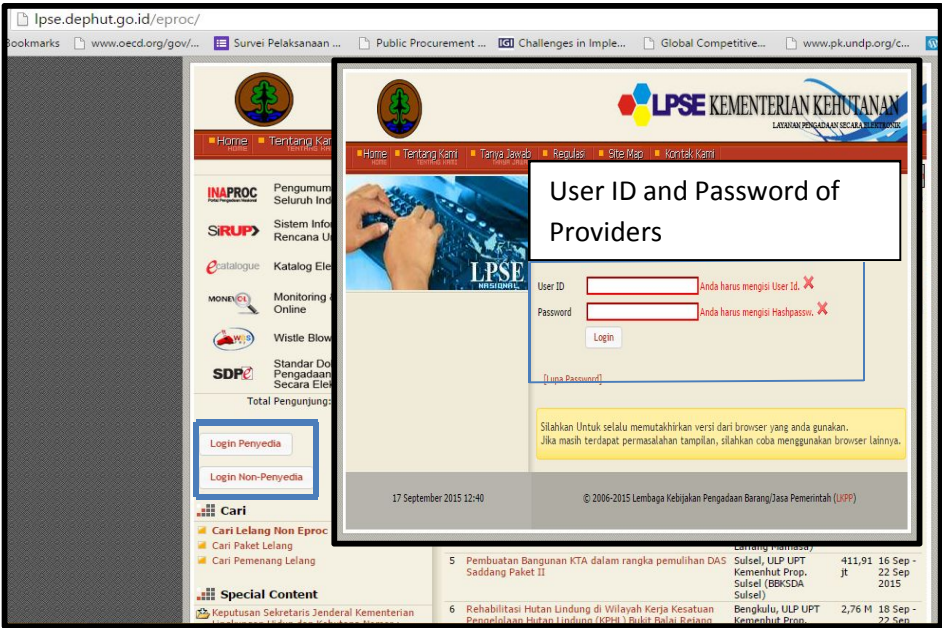
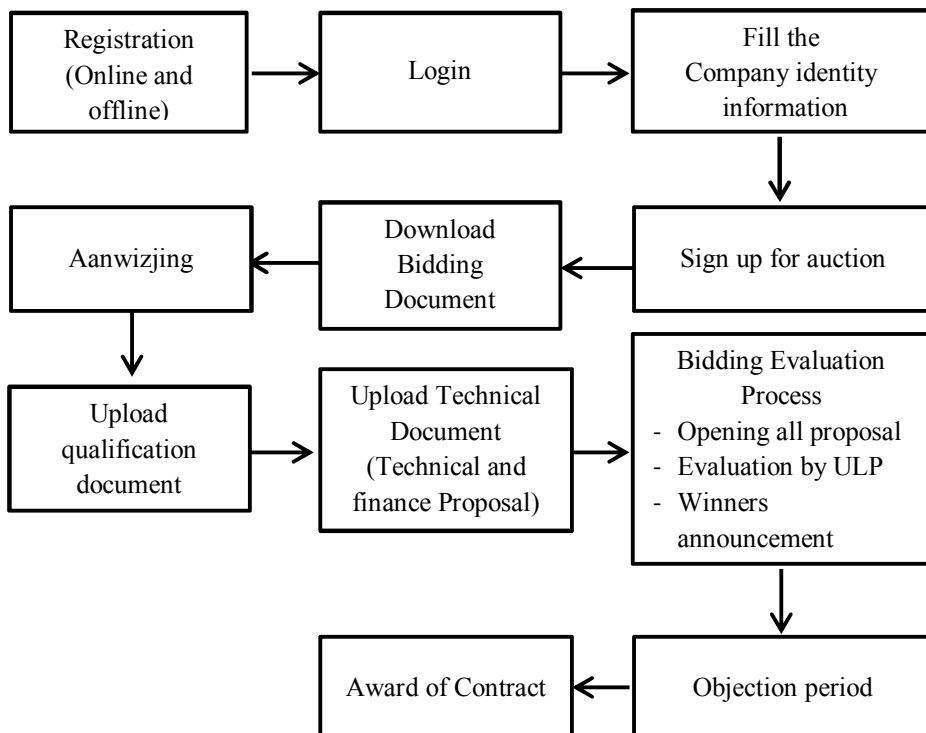


Figure 6. Bidding Log in

Figure 7. Bidding information page

Actually, the system automatically provides the tender information to provider when providers login into the system. The system will provide the tender information depend on their qualification (small enterprise, medium enterprise and large enterprise) and their interest (goods, consultant services, construction, or other services). This system will show all the information about new tender package can be followed. This system is very efficient because the providers getting much information based on their qualification and the all tender information is coming from all LPSE in Indonesia. So, the providers can follow the tender in government agencies throughout Indonesia. The e-tendering process shown in this graph.



Scheme 2. Process of providers in e-tendering system

Regarding the e-tendering system in LPSE website, all the information needed by providers is available. But, for the other system like e-purchasing system, the system offer the another model. E-purchasing system established in 2012 through Head of LKPP regulation No. 17/2012. In this system is requiring for the providers to make the MoU with LKPP first, when they want to participate in e-purchasing system. The providers give the information regarding their product like specification, price, picture of product, and availability of product to LKPP. LKPP will provide the information about the product in <https://e-katalog.lkpp.go.id>. In this system, ULP as the implementing unit in procurement activity will choose the providers base on their price and quality of product.

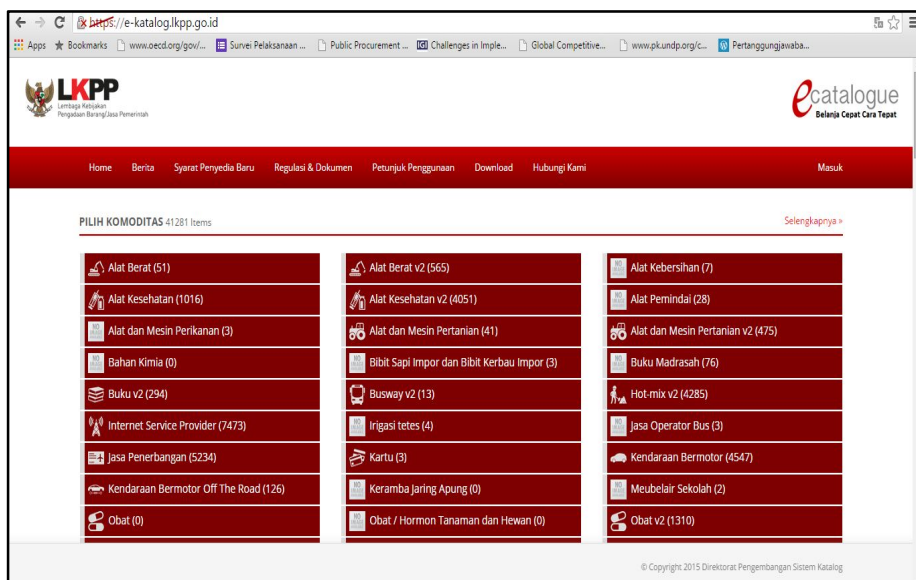


Figure 8. E-purchasing website

In this system, LKPP already provide 34 categories of goods/service commodities can be chosen such as heavy equipment, medical equipment, rent commodities, computer, medicine, etc. So, in this system, when the ULP have the bidding package related with the commodities are available in e-purchasing system, they should choose this system than do the e-tendering system. Because e-purchasing system more efficiently and effective.

4.5 Strategic Issues in e-procurement System

Regarding the strategic issues, researcher have some analysis on e-procurement implementation in Indonesia such as :

1. In e-procurement implementation in Indonesia actually more better than before. Like as mention by Vaidya, et all (2006) They stated e-procurement need technological standards and system integration. The point in this statement is regarding the system integration and technological standart in LKPP. LKPP can accommodate all the LPSE to implement the same technology. Until 2015, Indonesia have 2091 units of LPSE and implementing same feature and technology. And also this system has been integrating with LKPP server and other LPSE's.

But, one of the points to be considered is related to technology standards. The system has not applied the rules of the existing regulation precisely. For instance in the activities of the auction announcement, the auction announcement period is different depend on tender package (goods, consulting services, construction, and other services). For goods tender

with maximum budget over than 200 million rupiah (USD 15.000), the announcement period is 7 working days. And for another scheme in goods tender, Indonesia have simple tender. The simple tender it means the tender for not complex procurement and the value of this tender is lower than 200 million rupiah (USD 15.000), the announcement period is only 4 days. Sometimes, for reasons of ignorance of ULP, they will take a shorter period for notice the bidding information.

In the implementation of procurement, it is wrong and will being sued by the provider. The system should be able minimizing the user (ULP) to make a mistake of the process. This is the future challenges for e-tendering system to reduce mistake from procurement committee by maximize the role of system.

2. In Indonesia, regarding to equalization of opportunities from companies to participate in the tender, the government has been dividing the company into three types of companies based on the license to carry out business activities such as small enterprise, medium enterprise and large enterprise. Small enterprises qualification is they have net assets (exclude land or buildings) at least 50 million rupiah up to 500 million rupiah. Medium enterprises, in accordance with trade minister regulation No. 46/M-DAG/PER/9/2009, have net assets between 500 million and 10 billion rupiah (exclude land or buildings). And for large enterprise, they have net assets more than 10 billion rupiah (exclude land or buildings).

Regarding these points, one of the reasons why the government implements procurement activities is to improve the climate for small

businesses. With procurement activities, people are stimulated to become new entrepreneurs. Therefore in government procurement activities, the Government has been setting the tender activity classification. In President Regulation No. 54/2012, the goods procurement/ construction work /other services project who have tender value up to Rp2.500.000.000 (two and half billion) only can followed by small Enterprises as well as small cooperatives, except for the work package that requires technical competence that cannot be fulfilled by Micro and small Enterprises as well as small cooperatives.

But, when the e-purchasing system implemented, procurement committee/ULP have to purchase the goods/services through the e-purchasing system if those goods/service that needed were available in e-purchasing system. This rule was mentioned in President Regulation No. 4/2015. The problem today, especially for commodity electronic items such as computers, printers, etc. required continuously by the government there is only one company was registered and they are a large enterprise. That condition raises monopolistic practices by large enterprise, this practice make small business climate disturbed. So the aim to give priority to small enterprises for strengthening economic condition does not materialize. This case become a dilemma, on the one hand the government wants efficient and effective procurement activities but still need to support small business climate.

4.6 Survey Findings

Collecting and Analysis Data

Regarding the main focus in this research, Researcher had been succeed to conduct the survey. In survey, researcher has collected 103 respondents from 4 subcategories of providers. For the survey, researcher provided 32 questioners to respondent. In the questioner, researcher has been divide the questions related the independent and dependent variables such as accountability, transparency and integrity, and also the question about personal information of respondent.

Result of Findings

For data analysis, researcher used SPSS and Microsoft Excel. The data collection processing involved the standardized test (validity and reliability test), tabulation of respond from respondent and analysis of satisfaction level of providers (correlation and regression analysis).

Result of Validity and Reliability the Questions Instrument

Validity test in this researcher involved 25 respondents. From the result, researcher can justify all the questioners are valid. Based on the table, correlation is significant at the 0.01 level denoted by ** and for correlation is significant at the 0.05 level (2-tailed) denoted by *. For this research, researcher used the value of confidence interval is 0.05 or 95%. Value of T table value is using 25 respondents and level of confidence interval 95%, the value of coefficient correlation is 0.3809. So for the entire questions, the value of Pearson correlation for each question is greater than 0.3809. Data can see below in the table.

No	Variable	Question	Pearson Correlation
1.	Transparency	Accessibility of e-tendering information	.543**
2.		easiness to upload document	.558**
3.		Availability of e-procurement features information	.788**
4.		Availability of non e-procurement features information	.769**
5.		Clarity of time and content information	.778**
6.		Clarity in Aanwizjing process	.853**
7.		Answer the problem based on procedure	.794**
8.		Level of respond to answer the problem	.749**
9.		Respond to answer the problem are clear and substantive	.844**
10.	Accountability	Duration time of bidding process suitable with existing regulation	.900**
11.		Qualification requirement of Provider suitable with existing regulation	.911**
12.		Implementation of project is realistic	.694**
13.		Procurement process is appropriate with the procedure	.718**
14.		Estimation price	.662**
15.		Value for money	.720**
16.	Integrity	Fair competition	.452*
17.		Commitment regarding corruption, collusion and nepotism	.425*
18.		Consistent with existing rule of the	.673**

		game	
19.		Consistency of transparency, efficient, and accountability	.752**
20.		Fair and non-discrimination	.622**
21.		Independency	.622**
22.	Customer Satisfaction	Satisfaction on schedule of e-tendering process	.742**
23.		Satisfaction on e-tendering services	.713**
24.		Satisfaction on ULP services	.912**

Table 5. Test result of validity instrument

After the validity test, researcher had tested the reliability of questionnaires using the Cronbach's Alpha test in SPSS. The result of the validity test can see in the table below.

No	Variable	Cronbach's Alpha	N of Items
1	Transparency	0.929	25
2	Accountability	0.907	25
3	Integrity	0.882	25
4	Level of Satisfaction	0.883	25

Table 6. Reliability Statistics

Based on the Cronbach's test, the value of Cronbach's alpha is ≥ 0.67 . Referring to Gliem & Gliem (2003), they have indicated normally ranges the Cronbach's alpha reliability coefficient were between 0 and 1. The closer Cronbach's alpha coefficient is to 1.0 the greater the internal consistency of the items in the Likert-type scale. George & Mallery (2003) provided the following rules of thumb for Cronbach's alpha coefficient (α): " $\alpha > 0.9$ - Excellent, $\alpha > 0.8$ - Good, $\alpha > 0.7$ - Acceptable, $\alpha > 0.6$ - Questionable, $\alpha > 0.5$ - Poor, and $\alpha < 0.5$ - Unacceptable. Measurement validity and reliability is absolutely necessary, because if the instrument used is not valid and reliable

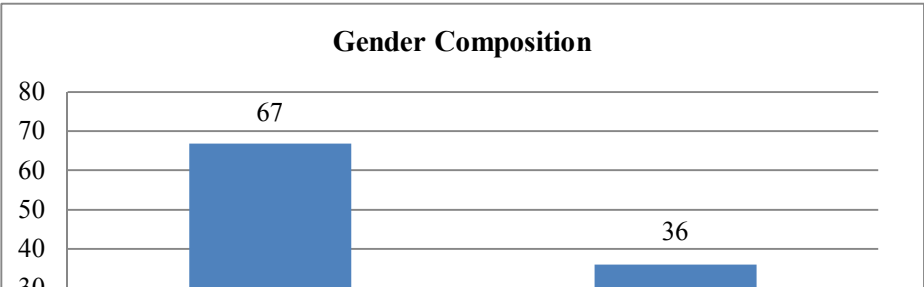
then certainly the research results will not be valid and reliable. It can be concluded, this questionnaire will remain consistent if it is applied again.

Characteristic of Respondents

Based on 103 data respondent, researcher can categorized the personal information into five categorized such as gender of respondent, position of respondent in their company, company business line, bidding experience in e-tendering system in Ministry of Forestry, and amount of tender won in ministry of forestry.

Sex of Respondents

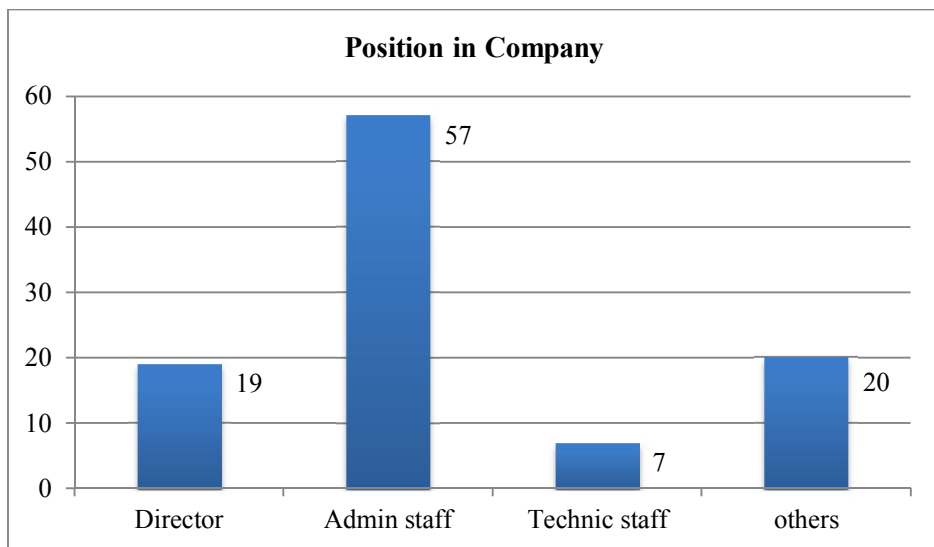
The total numbers of respondents were 103 respondents from four categories of business line. The compositions based on gender 67 respondents (65%) were male and 36 respondents (35%) were female. From the data survey, interview process, and researcher’s personal experience, researcher got conclusion mostly the gender composition in tender business dominated by male persons. This matter occurred because in Indonesia tender processes generally need staffs that have high mobility with uncertainty work hour.



Graph 4. Gender composition

Positions of Respondents

The position respondent ranges from the level of supporting staff to Directors are 20 respondents (19.4%) were others position, 7 respondents (6.8%) were technic staff, 57 respondents (55.3%) were admin staff, and 19 respondents (18.4%) were Director. Based on the data, the position that has many interactions with tender system was admin staff. They usually have responsibility to monitor the tender information and preparing the document for tender process. Regarding the other position, this position filled by project manager. The position project manager is common in big company especially in consultant services companies.



Graph 5. Position in company composition

Company's Business Line of Respondents

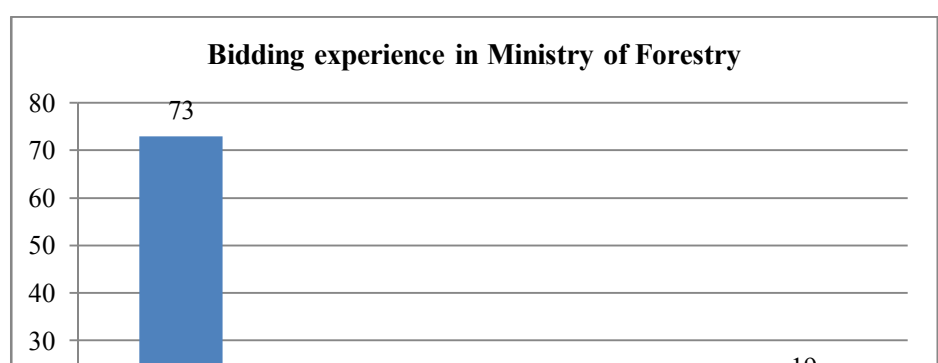
Regarding on the composition of company business line, researcher got difficulties to get equal data for each company business line. From the data, 35 respondents (34%) were engaged in good services, 32 respondents (30.1%) were engaged in consultant services, 18 respondents (17.5%) were engaged in construction services and 19 respondents (18.4%) were engaged in other services. In Ministry Forestry, the composition of tender between 2013-2014 especially in central office dominated by goods tender by 53 packages, consultant services tender were 61 packages, construction services tender were 10 packages and other services were 18 packages. The reason number of

respondent in construction services is lower than other because the total package and number of company had participated in the tender were few participants.

Graph 6. Company business line composition

Bidding Experience of Respondents

Based on bidding experience of respondents, respondents had followed the tender on e-procurement system in Ministry of forestry as much as 1-5 times were 73 respondents (70.9%), 6-10 times were 9 respondents (8.7%), 11 -15 times were 2 respondents (1.9%), and more than 15 times were 19 respondents (18.4%).

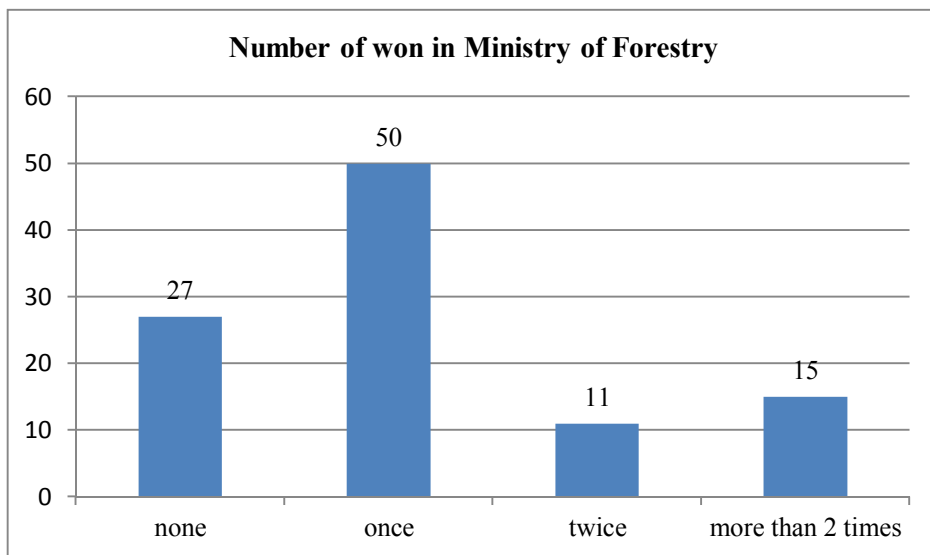


Graph 7. Bidding experience composition

Nowadays, after the e-procurement implementation in Indonesia has applied. Opportunity the company to follow the tender in every K/L/D/I becomes easier and more open to compete with other. Based on interview process and researcher's personal experience, sometimes the company when they have many experiences and opportunity to win in one ministry, they will have focused in that ministry. The companies are also calculating the factor such as possibility to win and bidding cost when they want join the tender. So, if any company had experienced to follow the bidding in one ministry more than 5 times, researcher assumed they were familiar with the system and they know how to win easily in that ministry. And for, company had experienced to follow the bidding lower than 5 times, they just try to compete in that ministry.

Amount of Tender Won in Ministry of Forestry

Regarding on the amount of tender won in ministry of forestry, 27 respondents (26%) has never won the tender in Ministry of forestry, 50 respondents (48.5%) has won the tender once, 11 respondents (10.7%) has won the tender twice, and 15 respondents (14.6%) has won the tender more than twice.



Graph 8. Position in company

From the data, researcher can assume the companies who have possibility to win the tender in ministry of forestry were familiar with the system and technical evaluation. This matter because in tender system has been same pattern to make the evaluation especially in good services and consultant services. And for company has never won in the tender system, researcher assumes they have not experienced to make a bidding document or bidding proposal.

Data Distribution

In this section researcher will show the respond distribution of respondent. The distribution will focus on 2 indicators, which are mean and standard deviation. Mean of answer for each question calculated by add up all the values and divide by the number of respondent. Whereas mean of variable calculated by add up all the values of questions in one variable and divide by the number of questions. Mean showed the average value of respondent to

answer the question. While, standard deviation are measures of how spread out a distribution of data.

Transparency Variable

Based on table 7 the mean score on transparency variables in e-procurement implementation was 3.68, with the minimum score was 3.19 and the maximum score was 4.12. The average score of transparency variable is near to highest scores 5. Researcher concluded majority of respondents agreed with the statement that represents transparency variable in e-procurement implementation was good enough. The ranges for standard deviation are between 0.808 till 1.278. If the value standard deviation is low, it means the data distribution is near to mean value and vice versa.

No	Question	Mean	Standard Deviation
1.	Accessibility of e-tendering information	4.12	.808
2.	easiness of Uploading document	3.95	.922
3.	Availability of e-procurement features information	4.06	.790
4.	Availability of non e-procurement features information	3.73	.992
5.	Clarity of time and content information	3.74	.990
6.	Clarity in Aanwijzing process	3.40	1.278
7.	Answer the problem based on procedure	3.44	1.160
8.	Quick Respond to answer the problem	3.19	1.205
9.	Respond the problem are clear and substantive	3.51	1.101
	Average	3.68	

Table 7. Distribution Data of Transparency Variable

Accountability Variable

Regarding to accountability variable, the average score from 6 questions were 3.84 with minimum score was 3.79 and the maximum score was 3.99. The score showed accountability aspect in e-procurement implementation has been good. The ranges for standard deviation are between 0.846 till 1.026.

No	Description Question	Mean	Standard Deviation
1.	Duration time of auction process suitable with existing regulation	3.99	.846
2.	Qualification requirement of Provider suitable with existing regulation	3.85	.933
3.	Implementation of project is realistic	3.81	.886
4.	Procurement process appropriate with the procedure	3.82	.978
5.	Estimation price	3.80	.784
6.	Value for money	3.79	1.026
	Average	3.84	

Table 8. Distribution data of accountability variable

Integrity Variable

Another aspect is integrity variable, researcher concluded the providers respond for integrity variable in e-procurement implementation was good enough. This is shown in the table below, the average score for integrity variables is 3.76 and the range score among the questions are between 3.52 till 3.94. The ranges for standard deviation are between 0.884 till 1.136.

No	Question	Mean	Standard Deviation
1.	Fair competition	3.77	1.068
2.	Commitment regarding corruption, collusion and nepotism	3.82	1.073

3.	Consistent with existing rule of the game	3.94	.884
4.	Consistency of transparency, efficient, and accountability	3.93	1.060
5.	Fair and non-discrimination	3.52	1.136
6.	Independency	3.56	1.126
	Average	3.76	

Table 9. Distribution data of integrity variable

Satisfaction Level Variable on e-tendering Implementation

For the dependent variable in this research is satisfaction level of providers, in this variable researcher provided three questions regarding the implementation process, LPSE service and ULP service aspects. From the data below, researcher concluded the satisfaction level of providers on e-procurement especially e-tendering system is quite good. This is shown in table below by average score in satisfaction level variable is 3.73, with the range score among the questions are 3.57 - 3.82. The ranges for standard deviation are between 0.860 till 1.006.

No	Description Question	Mean	Standard Deviation
1.	Satisfaction on schedule e-tendering process	3.82	.860
2.	Satisfaction on e-tendering services	3.82	.872
3.	Satisfaction on ULP services	3.57	1.006
	Average	3.73	

Table 10. Description of Satisfaction level variable

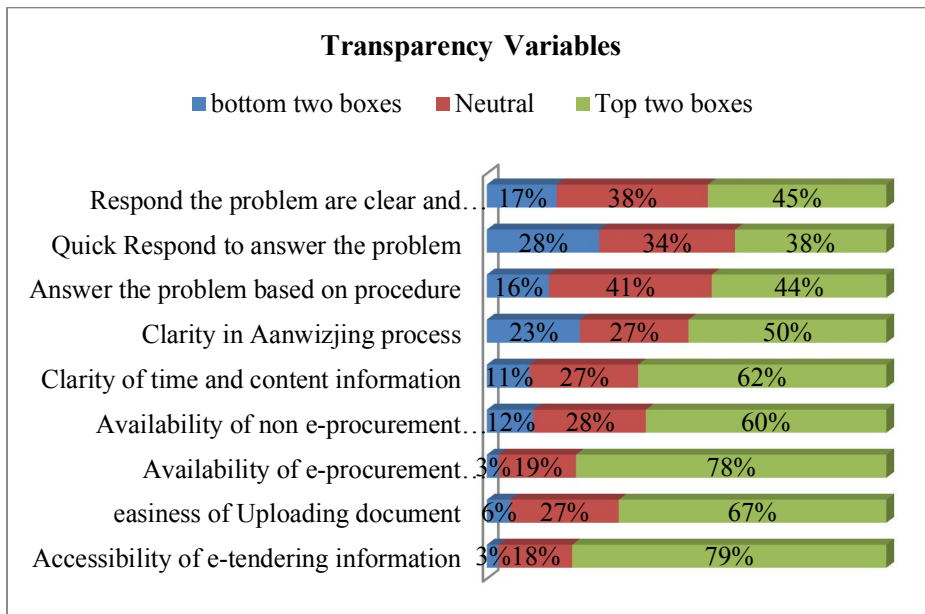
Top Two Boxes and Bottom Two Boxes Analysis

Analysis of the Top 2 Bottom 2 Boxes and Boxes is the analysis conducted to categorize the respondent's answer. To 2 boxes are respondents

agree and strongly agree, while the bottom two boxes are the respondent's answer who disagree and strongly disagree, and for neutral answers are categorized separately.

Transparency Variable Analysis

The transparency variables were consisted of nine questions. From the questions, researcher can summarize the item questions regarding availability of e-tendering information, easiness to upload the document, availability of e-procurement features, availability of non e-procurement feature, clarity of time and content information are quite good. The percentages of those questions by top two boxes result were more than 60%. For bottom two boxes, the questions that have highest dissatisfactory score such as clarity in Aanwizjing process, response to answer the problem based on procedure, response time to answer the problem, and respond to answer problem are clear and substantive. Those items have scored more than 15% for unsatisfactory response from respondent.



Graph 9. Top Two Boxes and Bottom Two Boxes in Transparency Variables

The reason majority of respondent satisfied with the system because all the feature of information provided quite properly by National Public Procurement agency (LKPP) who has responsibility to handle the e-procurement system in Indonesia. They have prepared and provided all the main feature were properly and appropriate with existing regulation. So, researcher conclude, providers have been satisfied with e-procurement features and availability of information services.

Another main concern is related to procurement service unit (ULP) who has responsibility to conduct the e-tendering process. The question related to ULP such as Aanwijzing process, response time to answer the problem, respond quality to answer problem based on clarity and the substance of question, response the problem based on appropriate procedure, and clarity of time and content of bidding information. But, several question also related with Electronic Procurement Service (LPSE) such as the question

regarding response time to answer the problem and quality response to answer problem based on clarity and the substance of question.

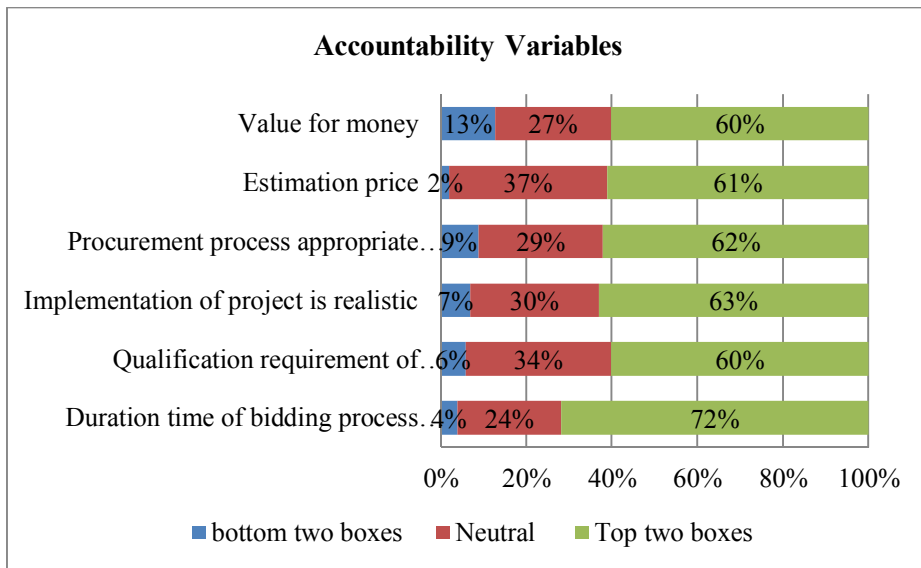
Furthermore, researcher analyzed those questions by bottom two boxes approach. Regarding on clarity in Aanwijzing process question and response time to answer the problem question showed the percentages of unsatisfactory box were 23% and 28% for both of question. Other variables are quite high also such as the question regarding quality response to answer problem based on clarity and the substance of question (17%) and answer the problem with appropriate procedure (16%).

Regarding response time to answer the problem and clarity in Aanwijzing process, researcher got many complaints from providers. This data collected by open question and interview process. From the respondents view, they supposed ULP has been indicated to give late response in Aanwijzing/briefing process. Generally in Aanwijzing process, ULP gave 2 hours for bidders to get clarification about the bidding information or bidding document. The briefing process was running by online system. However, in accordance with the rules of the head of LKPP no. 18/2012, the ULP has granted to answer the questions maximum 3 hours after the Aanwijzing process was closed. This rule usually used by ULP to deliberately accumulate all the questions until the process closed, and they will answer all the questions using 3 hours extra time given. Thus, the bidders don't have the opportunity to ask again if the answer from ULP is not clear.

Accountability Variable Analysis

Regarding to accountability variable, the variable are consisting 6 questioners such as : Suitability of duration time in bidding process with existing regulation, suitability of qualification requirement of providers with existing regulation, implementation of project is realistic, suitability procurement process with procedure, estimation price, and value for money. From top two boxes data, researcher can conclude mostly more than 60% of respondent feel satisfied for accountability aspect.

Furthermore, when the researcher tried to analyze the bottom two boxes data, 2 percent of respondents feel unsatisfied in cost estimate and value for money issue. These also proved by answer on open questionnaire, some respondents complained regarding price estimation/cost estimate policy. They said for price estimate, ULP always using the last year price reference. This policy made some bidder not comfortable with the price estimation and they decided to resign from the competition. Actually for new comer bidder or a startup company, they have to compete with large companies who have access and connection with the main distributor. For mature companies or large companies, they applied different model to get profit. Generally for new comer bidder, they will get some profit from margin price from distributor and user (government) and the maximum profit only 10%.



Graph 10. Top Two Boxes and Bottom Two Boxes in Accountability Variables

But for large firm, they will get profit and bonuses from accumulation total goods they can sell in tender activities along 1 year. So they didn't have much expectation to get much profit from the gap price, they just waiting for the bonuses from producer in the end of the year. So, the large companies will be reducing the profit proportion when they participated in tender process. Based on researcher's personal experience, the mature/large companies can offer the bid price around 90% from cost estimate. And for newcomer bidder or a startup company, the will offering bid price more than 95% from cost estimate. It means chances for a startup company to get project become more difficult when the procurement service unit (ULP) makes the cost estimate using the wrong reference.

As mention above, the issue about cost estimate will influence value for money of tender also. It is proven by 13% of respondent feel dissatisfied with value for money issue. The small firms don't have ability to compete the

mature/large companies in bidding price. Referring to Loader (2010), small firms are less likely to succeed in winning contracts on the basis of value for money while it continues to emphasize cost and quality, because of a view that large firms are more likely to meet these criteria.

Regarding to procurement regulation application in e-tendering process showed only 4-9% respondents feel dissatisfied. The high score percentage of dissatisfied was suitability of procurement process with the procedures (9%) and realistic of implementation project (7%). Based on interview with providers, they said sometimes ULP didn't understand with the procedure. Each ULP has different interpretation of the regulation. Other related to implementation project, commonly the tender process has carried in the mid of the year, this is being big problem for providers to do their project when they won the tender. The user will reduce the duration time project, because the limit of budget absorption in mid of December. So the implication when time duration reduction applied, Providers will sacrifice the quality of project.

The other important issues are suitability of provider's qualification requirement with existing regulation (6%) and suitability of duration time in bidding process with existing regulation (4%). In this case sometimes the qualification requirement to follow bidding does not suitable with the existing regulation. Because in Indonesia, ULP have to refer the regulation about standard industrial classification to make the requirement based on the kind of goods or service in tender package. Example such as camera tender package, the requirement for companies can follow the tender is company who have

trade business license in photography business. But sometimes the ULP make the requirement for providers is very general, because they didn't know about the regulation. Other reason, ULP gave more opportunity to other company although their qualifications were not suitable to increase the competition.

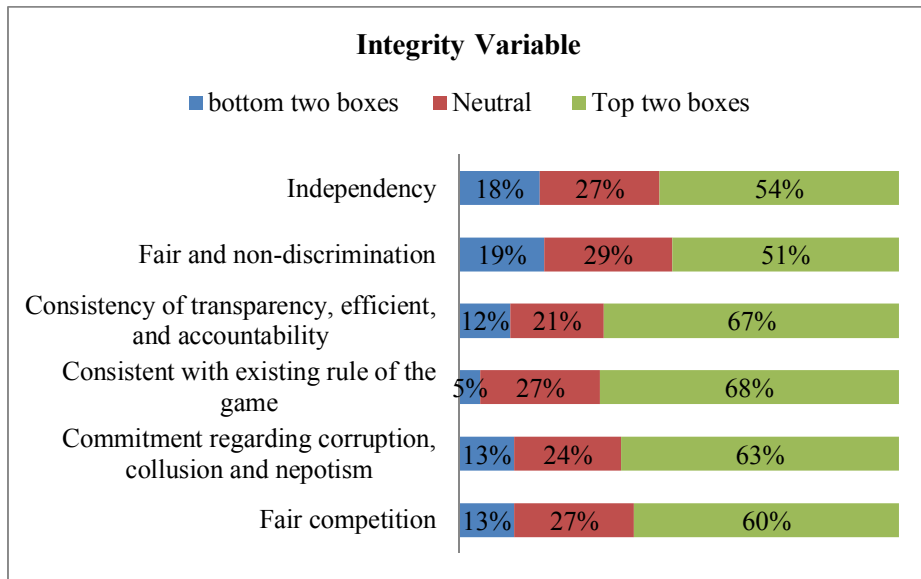
Regarding to suitability of duration time in bidding process with existing regulation, the problem raised because ULP did not follow the existing regulation. This case happened when they don't have time (time limitation) to make tender process, usually held in 3 months before budget closing date in December. ULP will reduce the time duration in every steps of tender. This case is also accommodated by the system. In electronic procurement system (SPSE), not yet adopt all relevant rules and time frame limitation. So, this system still gives chance to ULP for make their creation to conduct the tender especially in time duration.

Integrity Variable Analysis

According to integrity variable data, the compositions of percentage of top two boxes are still dominant than percentages of bottom two boxes. The list rank of top two boxes related to consistency with existing rule of the game (68%), consistency of transparency, efficient, and accountability (67%), commitment regarding corruption, collusion and nepotism (63%), independency aspect (54%) and fair and non-discrimination aspect (51%).

The main concern of researcher in this variable is compositions of bottom two boxes percentage are bigger than other variables. The range bottom two boxes percentage between 5% till 19%, and more than 10% of

respondents feel dissatisfied with integrity aspect in e-procurement implementation. The questions in this variable are dominated by behavior of ULP. Factors like independency, how to create the fair competition and non-discrimination, and commitment regarding corruption, collusion, and nepotism are the main concern in e-procurement system.



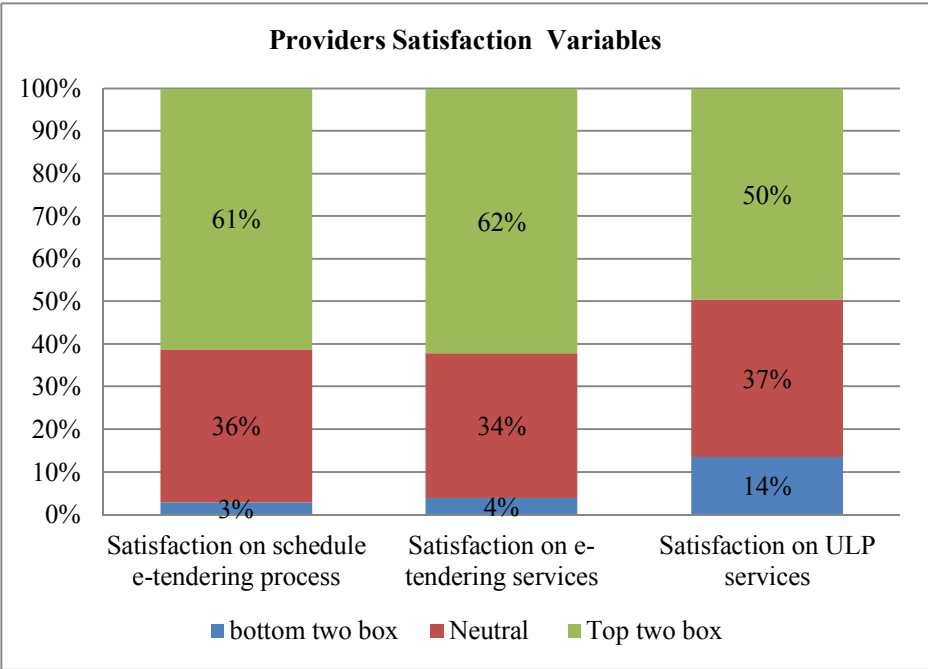
Graph 11. Top Two Boxes and Bottom Two Boxes in Transparency Variables

Actually the integrity level has increase in e-procurement system. However, cases related to bribery, corruption, and affect the assessment by the provider still occurred. The action is an initiative of the provider to win the tender. Another fact, many companies have made an agreement with another company to share the project. They will decide and rotate who will win in the project. So the implication, many companies especially startup companies resigned when they know this project already belongs to other company before the tender start. This agreement also involved ULP to help them to win the tender. Their relationship has been established for long time ago before e-

procurement implemented. So, it's not surprise if the winner of tender will rotate at the same group companies.

Providers Satisfaction Variable analysis

Further, based on the provider's satisfaction variables, majority of respondent feel satisfied on e-procurement system. Especially, respondent feel satisfied on implementation process and e-tendering services. Generally, researcher can conclude the satisfaction level on e-procurement implementation in Ministry of Environment and Forestry is quite good.



Graph 12. Top Two Boxes and Bottom Two Boxes in Transparency Variables

But some aspects of e-procurement implementation are needed to improve to increase the satisfaction level of providers such as:

1. ULP service as the actors who implement the e-procurement process need more improvement for personnel capacity especially regarding to regulation understanding and integrity aspect. It has been proven by 14 percent of respondent feel dissatisfied with performance of ULP.
2. Responds to answer the problem, between LPSE and ULP have important role to give response especially in Aanwijzing stages and when any difficulties to entry the bidding proposal from providers. Although the percentage of bottom top boxes for e-tendering services only 4%, these matters will be a serious problem when unhandled properly. The implication will be faced by ULP and LPSE related to objection from bidders, when this matter happens ULP will move their concentration from tender process to handle the objection case first.

Correlation among the variables

Test of normality as the requirement to decide the next step to analyze the data. The table showed the index of normality test. Researcher used Kolmogorov – Smirnov calculation to see the normality data, because the sample size is more than 50. If the sample size lowers than 50 the interpretation of normality test will use Shapiro-Wilk test.

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Transparency Variable	.131	103	.000	.931	103	.000
Accountability Variable	.152	103	.000	.913	103	.000
Integrity Variable	.145	103	.000	.920	103	.000
Satisfaction Variable	.157	103	.000	.921	103	.000

Table 11. Test of Normality

Based on the table, all the variables show the value in Sig on Kolmogorov – Smirnov is 0.000, the value in significant correlation value is lower than 0.05. It means the data is non-normal distribution and the implication the data will analyze by statistic non parametric. The reason the data in this researcher is non-normal distribution because the source data is ordinal, generally the research used likert scale question will use non-parametric method for analyze the data.

Correlations

Kendall's tau_b		(X ₁)	(X ₂)	(X ₃)	(Y)
Transparency Variable (X ₁)	Correlation Coefficient	1.000	.775	.582	.617
	Sig. (2-tailed)	.	.000	.000	.000
Accountability Variable (X ₂)	Correlation Coefficient	.775	1.000	.595	.630
	Sig. (2-tailed)	.000	.	.000	.000
Integrity Variable (X ₃)	Correlation Coefficient	.582	.595	1.000	.723
	Sig. (2-tailed)	.000	.000	.	.000
Satisfaction level Variable (Y)	Correlation Coefficient	.617	.630	.723	1.000
	Sig. (2-tailed)	.000	.000	.000	.

Table 12. Correlation among the variables.

Based on the test of normality, researcher has analyzed the correlation among the variables used Kendal's tau multivariate test. From the table, satisfaction levels of providers have significant correlation with transparency variable. This shown by the coefficient Kendall's tau for transparency variables is 0.617**. Another, for accountability variables compare to satisfaction level variables, the coefficient is 0.630**. It means accountability variable also has significant correlation for satisfaction level of providers. And for, the integrity variable compare with satisfaction level of providers, the coefficient is 0.723**.

Based on the result, Researcher can answer the hypothesis of this research. The hypothesis has risen regarding the transparency is:

- H_0 : satisfaction level of Providers is not significantly correlated with transparency factor.
- H_1 : satisfaction level of Providers is significantly correlated with transparency factor.

Value for correlation in transparency variable is 0.617 or near to 1, it means between transparency variable and satisfaction levels of providers were significantly correlated. And for answer the hypothesis, Value of Sig in transparency variable is 0.000, when the value is ≤ 0.005 is means Researcher can reject H_0 and accept H_1 . So, satisfaction level of providers has a positive correlation with transparency factor.

Regarding accountability variables, the hypothesis has been raised is:

- H_0 : satisfaction level of Providers is not significantly correlated with accountability factor
- H_1 : satisfaction level of Providers is significantly correlated with accountability factor.

Referring to table, value of accountability variable is 0.630, it means between accountability variable and satisfaction level of providers are significantly correlated. And value of Sig in accountability variable is 0.000, its means Researcher can reject H_0 and accept H_1 . So, satisfaction level of providers has positive correlation with accountability factor.

And for integrity variable, the hypothesis has been raised is:

- H_0 : satisfaction level of Providers is not significantly correlated with integrity factor.
- H_1 : satisfaction level of Providers is significantly correlated with integrity factor.

The value of integrity variable is 0.723, it means between integrity variable and satisfaction levels of providers are significantly correlated. And value of Sig in integrity variable is 0.000, its means Researcher can reject H_0 and accept H_1 . So, satisfaction level of providers has positive correlation with integrity factor.

Regression

To confirm which factor from 3 variables can influence satisfaction levels of providers, Researcher calculated the regression formula by Microsoft excel. The results are:

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.156	.201		.776	.440
transparency Variable (X ₁)	.275	.107	.274	2.564	.012
accountability Variable (X ₂)	.180	.119	.165	1.509	.134
integrity Variable (X ₃)	.499	.061	.534	8.232	.000

a. Dependent Variable: satisfaction level Variable

Table 13. Regressions

Or can be simplify be: $Y = 1.56 + 0.275 X_1 + 0.180 X_2 + 0.499 X_3$

From the formula, researcher can justify the factor have more significant to influence the satisfaction level of provider on e-procurement implementation in Indonesia is integrity factor. It showed by the coefficient of transparency variable to influence the satisfaction level only 0.275. For accountability variable is 0.18 and most dominant is integrity variable 0.499.

The information from the formula are Y is satisfaction level of providers, X_i is transparency variables, X_{ii} is accountability variables, and X_{iii} is integrity variables. From this regression formula, researcher can justify the factor that have more significant impact to influence the satisfaction level of provider on e-procurement implementation in Indonesia is integrity factor.

Because, with added one effort/point in integrity variables can increase 2.059 point in satisfaction level of providers. It means become easier to government if they want to improve the satisfaction level of providers through upgrade the integrity variable.

Other, the interesting point is for accountability regression. In accountability show if one effort/point in accountability variable will influence the satisfaction level of providers 1.745 point. This variable has the small coefficient to influence the satisfaction level of providers. It means, accountability variable is the most challenges variable for government to get a good response from the providers in e-procurement implementation. The reason is accountability variable is strong relation with the system and the regulation. Actually, in e-tendering system still has problem to adopt the existing regulation. This is be a challenges for LKPP as the institution who have responsibility to develop the information systems and supervise the implementation of electronic procurement. Other reason is relating to capability, knowledge and ULP's goodwill to run the e-tendering by appropriate process and regulation.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

In this chapter researchers will summarize on two issues that are the condition on e-procurement implementation in Indonesia and findings of satisfaction level of providers in e-procurement implementation. Regarding to procurement implementation, researcher try to describe the current status of e-procurement implementation in Indonesia. Researcher divided the first topic into three categories such as the legal framework of e-procurement, institutional framework of e-procurement and last one is implementation system and technology. Furthermore, regarding the second topic, researcher will summarize the key findings of survey.

Summary of the Key Findings

Indonesia implemented the e-procurement system since 2007, after National Development and Planning Agency (BAPPENAS) got mandate from President in 2004 through President Instruction No.5/2004. This mandate gave order to BAPPENAS to run the procurement activity based on electronic system. To establish the procurement regulation, President launched several regulations such as Presidential Decree No.80/2003. In this regulation, President gave permission to apply procurement activities through internet,

electronic data interchange and email, and also launched institute of policy development on public procurement (LPKPP).

The prototype of e-procurement system was successfully launched in 2007 when BAPPENAS launched procurement portal www.pengadaannasionalbappenas.org.id. The e-procurement progress has been more significantly when BAPPENAS made the initiation with Governor from five Provinces (West Sumatera, East Java, West Java, Central Kalimantan, and Gorontalo) to start up e-government procurement project.

Furthermore, legal standing of e-procurement in Indonesia has been strengthened when Government issued President Regulation No.54/2010. This is the main gate of e-procurement system in Indonesia. In this regulation, Government described the details about the procurement step and announced to use e-procurement system in procurement activities. Others, Government also introduced the institutional framework to accelerate the e-procurement system in Indonesia such National Procurement Agency (LKPP), Electronic Procurement Services (LPSE), Procurement Unit Services (ULP), procurement official and internal auditor. Another point is Government introduced the part of e-procurement system such as e-tendering, e-catalogue, and e-purchasing.

Further, to strengthen the existence of President Regulation No.54/2010, LKPP as the institution who have responsibility to develop and formulating the public procurement in Indonesia launched many regulation to accelerate and support the institution and system of e-procurement. The regulation has been launched such as implementation guidelines and technical

guidelines of LKPP, LPSE, and ULP as the stakeholder in e-procurement system. Other, LKPP also made the system e-procurement or more familiar in Indonesia called SPSE, they provided the system to run the e-tendering, e-purchasing, and e-catalogue.

After the implementation of e-procurement system (SPSE) since 2012 in Ministry of Forestry, researcher through top two boxes and bottom two box approaches got the result 57% of respondent satisfied with overall e-procurement implementation, 36% of respondent said neutral, and 7% of respondent unsatisfied with overall e-procurement implementation.

For transparency variable, 58% of respondent satisfied on transparency aspect in e-procurement implementation, 29% of respondent said neutral and 13% of respondent unsatisfied on transparency aspect in e-procurement implementation. Based on bottom two boxes approach, some of critical point need to improve for transparency aspect is how the ULP and LPSE manage the problems. This matter include how to answer the problem quickly, substantive and still based on the procedure. Another critical point is related to ULP in Aanwizjing process.

Other aspects are accountability and integrity. Regarding accountability in e-procurement implementation the result is 63% of respondent feel satisfied, 30% of respondents said neutral, and 7% of respondent feel unsatisfied. Related with accountability, several problem need to improve such as stakeholder especially for user and ULP, they need to consider value for money and the estimation price. Other issue is related with implementation e-procurement based on appropriate procedure.

For integrity aspect in e-procurement implementation, 61% of respondent feel satisfied, 26% of respondent said neutral and 13% of respondent have unsatisfied with integrity aspect. The issues in integrity aspect need to improve in the future are related to fair and no discriminant aspect, independency and commitment regarding corruption, collusion and nepotism aspect.

Researcher got result regarding the correlation among the variables were observed in this research, the data showed all the independent variables such as transparency, accountability and integrity have positive correlation with the satisfaction level of providers as the dependent variable.

Regarding to regression analysis, for transparency variable the regression formula is $Y = 1.56 + 0.275 X_1 + 0.180 X_2 + 0.499 X_3$. The easier variable to increase the satisfaction level of providers in e-procurement implementation is integrity factor, and the hardest is accountability variables.

Recommendation

Based on the findings in this research, the recommendation related with the strategic issues in e-procurement process can be categorized into 2 category. First, relating to e-procurement technology. LKPP has to ensure the system adopting the existing regulation. The system was implemented today has been designed to give chance and accommodated the users to modify the auction more easily especially for the time period of auction. The reasons of this situation are related to the problem in e-procurement condition in Indonesia such as capability the user to operate the system, fail auction possibility and realization of procurement budget issues. However, In this

year as the 4th years of e-procurement system was implemented in Indonesia. So, LKPP has to adopt and implemented the system suitable with the existing regulation. This is a task of LKPP to facilitate and provide the system, because if the system was integrated and suitable with the existing regulation, the fraud potency by users and objection case by providers can be minimized.

Another is related to e-purchasing issues. As mentioned before in chapter four, the e-purchasing has dilemmatic problem. On one side, the aim of e-purchasing is to accelerate the procurement activity, and it is successful implemented. And, on other side Government has mission to maintain the economic condition by giving the economic stimulus through public procurement activity. When the e-purchasing was implemented, the condition forced the companies or enterprise to follow the e-purchasing scheme. Regulation related to opportunity of providers to win the tender based on value of package and specification of companies/enterprise has been deleted by government in e-purchasing system. Today, in e-purchasing large enterprise who has access and big funding support can win the tender more easily. The e-purchasing regulation has hampered the economic stimulus development to small enterprise. Related to this condition, the recommendation is related to regulation.

E-purchasing implementation has regulated by President through President Regulation No. 4/2015. In this regulation, ULP have to purchase the goods/services through the e-purchasing system if that goods/service that needed were available in e-purchasing system. So, Government can accommodate the small and medium enterprise participates in e-purchasing

system through reformulate the e-purchasing system and gives simplicity to enterprise to participate in e-purchasing system.

Reformulate in e-purchasing system can be implemented by dividing the system into two categories such as e-purchasing for goods procurement/ construction work /other services project that have tender value up to Rp2.500.000.000 (two and half billion) only can followed by small enterprises as well as small cooperatives. And for tender package more than Rp. 2.500.000.000, can be followed by small, medium and large enterprise can participate in the tender. Implication of this regulation is LKPP have to prepare and modify the e-catalogue based on the tender package value. The website have to provide the e-purchasing tender system for package under Rp. 2.500.000.000 for small enterprise and e-purchasing tender system for package above Rp. 2.500.000.000 for small, medium, and large enterprise.

Regarding to the findings in satisfaction level of providers survey, the survey founded several issues can determine as technical issues. The problems such as handling complaint and respond of ULP in Aanwizjing process in transparency aspect. The issues regarding value for money, estimation price issues and implementation e-procurement based on appropriate procedure in accountability aspect. And issues related to commitment regarding corruption, collusion and nepotism aspect in integrity aspect.

The recommendation for those issues such as: LPSE in every K/L/D/I have to make the program to upgrade skill and competencies the ULP staff by refresher training. Another, during the auction process ULP has to get assistance by internal auditor or the users of auction to monitor and evaluate

the progress of auction. Another related to integrity aspect, as the information ULP will get allowance based on value of package such as if they can completely the auction process until the payment of contract for goods package with value around Rp. 1.000.000.000 - Rp. 2.500.000.000 (USD 73.000 – 185.000), ULP will get the allowance for that package Rp. 1.140.000 (USD 83). Actually, the total duration for one package until the payment of contract mostly take a time more than 4 months. Government should make the formulation especially for package or monthly allowance for ULP. Actually, Indonesia was started to implement the procurement specialist position in 2013. But, to support the procurement specialist position, Government should accelerate to give the certainty of monthly allowance. This scheme will help to reduce the potency to accept the bribes and make the corruption by ULP.

Conclusion

Overall, researcher concluded the e-procurement implementation in Indonesia is quite good enough. Government should make improvement to give better services. Referring to Jones (2007), the challenges of public procurement in Southeast Asia can be divided into five categorized such as the legal and procedural framework, institutional and human resource capacity, competition and access, corruption, transparency, and decentralization. When we referring to the statement, Indonesia has been much improved the public procurement especially through e-procurement system and regulation and institutional aspect.

Nowadays, Indonesia has been produced many regulations related to public procurement. This is a way to improve the quality of public procurement in Indonesia. Moreover, reviewed from institutional aspect, the development of public procurement become more effective and focused since President has been designated LKPP as procurement national agency and other supporting institutions such as the LPSE and ULP.

Improving the quality of public procurement was conducted by the e-procurement system through e-tendering and e-purchasing. These results indicate the implementation of e-procurement has brought to change in terms of accessibility and competition. Tender activities can be followed by anyone from anywhere. Transparency in e-procurement has been increasing the confidence and satisfaction of users and citizen. E-procurement finally as the succeed program to reduce the potential for corruption.

Referring to the satisfaction level of providers in e-procurement implementation, based on the research mostly 50% respondent feel satisfied with e-procurement implementation. However, on e-procurement implementation need to be improved in several aspects such as handling complaint/problem management, improvement on tender information, improvement on human resources, and improvement on e-procurement implementation based on appropriate regulation, and the most critical related with ethical issues is integrity of stakeholder.

REFERENCE

- A. Gunasekaran and E.W.T. Ngai, 2008. *Adoption of e-procurement in Hong Kong: An empirical research*. Int. J. Production Economics 113 (2008) 159–175.
- Alaweti, Mohamed Fathi. Nurdiana, and Qais Faryadi. *The Transparency of Public Bidding and Contracting Using E-Procurement in Malaysia SMPPS*. Proceeding of the International Conference on Social Science Research, ICSSR 2013 (e-ISBN 978-967- 11768-1-8). 4-5 June 2013, Penang, MALAYSIA. Organized by WorldConferences.net.
- Abebe, gizachew. *Efficiency, Accountability and Transparency in Public Procurement: The Level of Compliance in Africa (Ethiopian Case)*. www.ippa.org/ippc5_proceedings6.html.
- Armstrong, Elia. 2005. *Integrity, Transparency and Accountability in Public Administration: Recent Trends, Regional and International Developments and Emerging Issues*. United Nation.
- Bauhr, Monika and Marcia Grimes. 2012. *What is Government Transparency? New Measure and Relevance for Quality of Government*. University of Gothenburg. Goteborg.
- Catteneo. Gabriella, Rossana Lifonti, IDC. 2013. *Study on e-Procurement Measurement and Benchmarking MARKET*. IDC. USA.
- Gardenal, Fransesco,. Andrea D’Angelo,. and Valerio Manzo. *A Model to Measure E-Procurement Impacts on Organizational Performance*. www.ippa.org/IPPC5/Proceedings/Part2/PAPER2-13.pdf.
- Gardenal, Fransesco. *Public e-procurement – defines, measure, and optimizes organizational benefit*. <http://www.ippa.org/IPPC4/Proceedings/05e-Procurement/Paper5-1.pdf>.

- Gliem, J. A., & Gliem, R. R. (2003). Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales. 2003 Midwest Research to Practice Conference in Adult, Continuing, and Community Education. <http://www.ssnpstudents.com/wp/wp-content/uploads/2015/02/Gliem-Gliem.pdf>.
- Jones, David Seth. 2010. *Reforming public procurement in the Philippines: progress and constraints*. <http://www.ippa.org/IPPC4/Proceedings/01ComparativeProcurement/Paper1-14.pdf>.
- Kemenkeu, 2012. The Regulation Of Minister Of Finance Of The Republic Of Indonesia Number 233/Pmk.01/2012 Concerning Procedures Of Implementation Of Procurement Of Goods / Services Electronically Within The Vicinity Of Ministry Of Finance. Republic of Indonesia.
- Kumar V, Mukerji B, Butt I and Persaud A (2007) "Factors for Successful e-Government Adoption: a Conceptual Framework" The Electronic Journal of e-Government Volume 5 Issue 1, pp 63 - 76, available online at www.ejeg.com
- Thai, Khi V. 2009. International Handbook of Public Procurement. CRC Press.
- Millard, Jeremy. 2008. *E Government measurement for policy makers*. European Journal of ePractice. http://www.epractice.eu/files/4.3_0.pdf
- UNODC. 2013. *Guidebook on anti-corruption and the management of public finances*. United Nations office on drugs and crime. Vienna
- Nikolaos A. Panayiotou, Sotiris P. Gayialis, Ilias P. Tatsiopoulou, 2004. *An e-procurement system for governmental purchasing*. Int. J. Production Economics 90 (2004) 79–102.
- OECD. 2007. *Integrity in Public Procurement: Good Practices from A to Z*. Paris France

- OECD. 2008. *Recommendation Of The Council On Enhancing Integrity In Public Procurement*. OECD.
- OECD. (2011). *OECD National Accounts Database*. Retrieved December 2011.
http://www.oecd.org/topicstatsportal/0,3398,en_2825_495684_1_1_1_1_1,00.html
- OECD. 2012. *Progress Made In Implementing the OECD Recommendation on Enhancing Integrity in Public Procurement*. OECD.
- Queensland Government.2006. *Ethics, Probity and Accountability in Procurement*. Queensland Government.
- Schapper, Paul. 2008 *The impact of e-procurement on corruption: The potential of e-procurement for curbing corruption risks*. In: ADB/OECD (2008) *Fighting Bribery in Public Procurement in Asia and the Pacific*. Proceedings of the 7th Regional Seminar on making international anti-corruption standards operational, Indonesia 2007.
- Transparency International. 2011. *E-Procurement Reduces Opportunities for Corruption and Bribery*. Transparency International. Brussels.
- Schoenherr, Tobias and V.M. Rao Tummala (2007). *Electronic Procurement: A Structured Literature Review and Directions for Future Research*. *International Journal of Procurement Management*.
- Ssonoko, 2010. *Ethics, Accountability, Transparency, Integrity, and Professionalism in The Public Service: The Case of Uganda*. Uganda Management Institute.
- UNDP. 2010. *Fostering Social Accountability: From Principle to Practice Guidance Note*. UNDP. Oslo.

USAID, 2007. *Millennium Challenge Corporation Threshold Program for Indonesia Control of Corruption Project (MCC-ICCP)*.
http://pdf.usaid.gov/pdf_docs/Pdack408.pdf

Velnampy, T. *Evaluation Of Factors Influencing Effective Procurement Management System Of Public Sector Organisations*. University of Jaffna.

Background

1. Indonesia started e-procurement in 2010
2. During the year 2013, the total cases of objections on the procurement process are 7.349 cases
3. Causes of auction failure : error input by the committee (21%), budget change (4.3%), participants who entered the offers less than 3 (11.3%), the participants who did not pass the evaluation (32%).
4. Data from Indonesia Corruption Watch, on semester I 2013 case of corruption it's caused by procurement cases was increasing, 114 of 293 cases or 46, 4% and 314 suspects.
5. The e-procurement process within ministry/agencies must have the electronic certificate, one of steps to get electronic certificate

Methodology and Data Collection Method

Quantitative and Qualitative Method

Respondents

1. Individuals as representative firms or providers who follow the bidding process.
2. Individuals who have had experiences of following e-procurement system.

Question Research

How is satisfaction level of providers on e-procurement implementation in Indonesia (Study Case on Ministry of Forestry)??

Benefit of Research

1. To evaluate the performance of e-procurement system,
2. To be an input for policy making consideration,
3. To be an input for the performance improvements.

APPENDIX

QUESTIONNAIRE FOR RESPONDENT

Dear respondent,

I am a Global Master of Public Administration student of Seoul National University (SNU). Regarding to enhancement of e-procurement services on Ministry of Environment and Forestry Procurement Services Unit, We are conducting a study on topic “Satisfaction Level of Providers on E-Procurement System in Indonesia”. We need your participation of this questioner to improve the quality of e-procurement services. Please be assured that confidentiality of your response is highly guaranteed and your response will be used for academic purposes only. And if you need findings of this research do not hesitate to send request to rangga.phka@gmail.com. We would to thank you for your participation on this questioner.

Before you answer the questions, please complete the data about your profile. Please fill the information by putting checklist on the answer below. Your identity will treated confidentially.

Section A.

1. Name of Company :
2. What is your sex?
 - a. Male
 - b. Female

3. What is your position on firm
 - a. Director of company
 - b. Staff administration
 - c. Technical staff
 - d. Others,.....
4. What is your company's business line
 - a. Goods services
 - b. Consultant services
 - c. Construction services
 - d. Others services
5. How many times have you followed the bidding process by e-procurement in Ministry of Environment and Forestry (2013-2014)?
 - a. 1-5 times
 - b. 6-10 times
 - c. 11-15 times
 - d. More than 15 times
6. How many times have you won by e-procurement system in In Ministry of Environment and Forestry (2013-2014)?
 - a. Once
 - b. Twice
 - c. Three times
 - d. More than three times

Section B

The questions below related with transparency on e-procurement process in Ministry of Environment and Forestry through <https://sirup.lkpp.go.id/> and lpse.dephut.go.id/ website.

Accessibility of Information

7. I'm satisfied when accessing lpse.dephut.go.id/ website to get the information and following the auction

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

8. I don't seen any problem about the connection when upload document to follow auction

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

Availability of Information

9. I'm satisfied with availability of information on e-procurement auction packages

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

10. I'm satisfied with availability of information on manual procurement/non e-procurement bidding packages

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

Clarity of Information

11. I'm satisfied with time information and content information on auction information

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

12. I'm satisfied with Procurement service unit (ULP) / Procurement committee (PP) performance when they conduct the Aanwijzing process?

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

Responsibility to Handle Complaint

13. ULP / PP answer all the question based on procedure

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

14. ULP / PP convey the objection answers in a timely manner

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

15. ULP / PP answer to all the points of objection are clear and substantive

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

Section C

The questions below related with accountability on e-procurement process.

Using the appropriate Regulation

16. Duration time of auction process suitable with existing regulation

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

17. Qualification criteria for bidders is objective and comply with existing regulation

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

Using the Right of Implementation Process

18. Tender implementation is realistic

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

19. ULP / PP act in accordance with the procedures in every step of tender process

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

Efficiency

20. The price estimation (HPS) in the procurement documents are prepared using a standard reference the official price

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

21. ULP / PP evaluation and assessment of all offers by selecting the best of value for money?

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

Section D

The questions below related with Integrity on e-procurement process.

The commitment

22. ULP / PP is committed to create fair competition in auction

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

23. ULP / PP is consistent with the auction which is free from intervention, fraud, corruption, collusion and nepotism

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

The consistency

24. ULP / PP consistent to run every stage in accordance with regulations

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

25. ULP / PP is consistent to run the auction more transparent, efficient and accountable

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

Independency

26. ULP / PP is fair and nondiscriminatory

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

27. ULP / PP is independent

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

Section E

The questions below related with consumer satisfaction on e-procurement implementation.

28. I'm satisfied on e-procurement process in ministry of environment and forestry

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

29. The e-procurement services running well

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

30. I'm satisfied with the ULP/PP performance

Strongly Agree 1.....2.....3.....4.....5 Strongly Disagree

Section F

Below is an essay question, please answer the question clearly and concisely.

31. In your opinion, what factors make you satisfied with the e-procurement services in the ministry?

32. What factors make you dissatisfied with the e-procurement services in the ministry?

---- Thank you ----

인도네시아 전자조달시스템에 대한 공급자 만족도에 대한 연구

Rangga Agung Prabowo

글로벌행정전공

서울대학교 행정대학원

전자조달은 정부의 공공구매를 실행하기 위한 수단이다. 인도네시아는 2010 년에 전자조달 시스템을 도입함으로써 공공구매 패러다임의 전환에 성공하였다. 정부는 전자조달시스템을 위한 법적 근거, 제도, 체계를 수립하였다. 본 연구는 연구 결과를 설명 및 기술하기 위하여 양적 및 질적 연구방법론의 통합방법론을 활용하였다.

이 연구는 전자조달 시스템의 실행과 공급자의 만족도에 중점을 두고 있다. 공급자의 만족도는 투명성, 책임성, 청렴성 변수를 통해 측정되었다. 본 연구의 목적은 인도네시아의 전자조달시스템의 성과를 측정하는데 있다. 데이터 수집은 인도네시아 환경산림부의 공무원 103 명을 대상으로 진행하였다. 본 연구의 결과에 따르면 정부는 전자조달 시스템의 질을 개선하는데 있어 일정한 성과를 보여주고

있으며 전자조달시스템에 대해 공급자 다수가 만족하고 있는 것으로 나타났다.

키워드: 전자조달시스템 현황, 공급자 만족도, 서베이 조사 연구

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